



ESTABLISHED 1859.

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CONTENTS: Vol. LV. No. 27.

	PAGE		PAGE
American News	1049	Irish News	1047
Bankruptcies and Failures	1052	Legal Reports	1052
British Pharmaceutical Conference	1056	Medical Gleanings	1055
Business Changes	1050	New Companies and Company News	1053
Colonial and Foreign News	1048	Observations and Reflections	1057
Coming Events	1078	Olive Oil in Syria	1077
Correspondence	1072	Personalities	1051
Deaths	1071	Proprietaries in India	1077
East Indian News	1056	Scotch News	1047
Editorial Comments:—		Spectacle-makers' Company	1071
Vol. LV.	1058	Tinct. Ohlorof. et Mo ph. Co., B.P. By J. H. Coste	1054
Pharmacy and the Drug trade in 1899 ..	1059	Trade-marks Applied For	1054
The Companies Bill	1069	Trade Notes	1053
Notes	1069	Trade Report	1075
English News	1046	War Notes	1050
French News	1047	Wills of Deceased Chemists	1078
Gazette	1053	Winter Session	1051

THE ANSWERS TO OUR DIARY QUESTIONS

should be sent in by home subscribers before December 31. The questions appear to be attractive, and the results are likely to be of greater interest than usual. Each copy of THE DIARY contains a coupon, and the card attached to it has spaces for the replies. We are to give 10l. 10s. in prizes.

OUR WINTER ISSUE.

THIS falls on January 27, 1900. The publisher has commenced his preparations for it, and an original illuminated cover is in the hands of the printers. We mention that fact to show that the time is ripe for giving orders for circulars, price-lists, or other insets, which firms may think of inserting in our Winter issue. The C. & D. publisher has printed instructions in regard to the "make-up" of insets, which should be obtained. We may add that rough ideas for insets can be worked up by our artists, if desired.

Summary.

VOL. LV. ends with this number (p. 1058.).

WE print on p. 1078 a large number of wills of deceased chemists.

A COMPLETE INDEX for the volume is inserted between pp. 1076 and 1077.

CINNAMON is faked in a remarkable manner by the Singalese (p. 1069).

THE SAD DEATH of a pharmaceutical annuitant is reported on p. 1076.

INTERESTING NEWS from a correspondent in New York is printed on p. 1049.

CIGARETTE-ANALYSES are reported on p. 1070, which show how mild the best brands are.

HERB W. CONRAD, a former well-known operator in iodides, has died in Berlin (p. 1071).

SOME PRACTICAL HINTS as to the suppression of charlock with copper sulphate are given on p. 1070.

RESEARCH-SUBJECTS suggested by the British Pharmaceutical Conference are printed on p. 1056.

MR. F. W. HARRIS, F.O.S., Burnley, has been appointed chemist to the Glasgow Corporation (p. 1047).

THERE is not much doing in the markets this week, and few changes are recorded in our report on p. 1075.

COMPOUNDERS' VACANCIES in the Royal Army Medical Corps could have been filled ten times over (p. 1050).

A METHOD for assaying tr. chloroformi et morphinæ co. is described by Mr. J. H. Coste, F.I.C., F.O.S., on p. 1054.

"XRAYSER" predicts that Mr. Martindale's statements to the Board of Trade will end in nothing being done (p. 1057).

A REVIEW OF THE YEAR, dealing with pharmaceutical matters—legal, technical, and trade aspects—begins on p. 1059.

OPTICAL STANDARDS were the subject of a paper read by Mr. L. Laurance to the Optical Society, which is reported on p. 1051.

CAMPORATED OIL of poor quality has brought a number of retailers into Court, amongst them several chemists (p. 1052).

FAILURES THIS YEAR indicate that the drug-trade, as well as trade generally, has been better than in 1898 (p. 1053).

THE ELIXIR OF LIFE is reported to have been discovered by a Pasteur Institute researcher. Serum, of course (p. 1070).

THE deaths of Mr. Andrew Thompson, of Carlisle, and Mr. Mount, of Canterbury, two veteran pharmacists, are reported on p. 1071.

GERMAN CHEMICAL-TRADE continues to prosper. We give a digest of the report by the Association of Chemical-manufacturers (p. 1070).

MESSRS. GEO. CULVER AND J. H. RAPHAEL have been elected members of the Optical Committee of the Spectacle-makers' Company (p. 1071).

A CALCUTTA CORRESPONDENT sends us some interesting information regarding the medicinal proprietaries in which a good trade is done in India (p. 1077).

THE ROYAL COLLEGE OF SURGEONS, ENGLAND, declines to fall in with the Medical Council's views respecting the registration of medical students (p. 1069).

MR. BOOT'S utterances to his company, and what he has written in THE CHEMIST AND DRUGGIST, are contrasted by "Xrayser" to show that he is not opposed to the directorate idea (p. 1057).

MR. MARTINDALE, President of the Pharmaceutical Society of Great Britain, has explained to the President of the Board of Trade trade-views on the company question, and the lines upon which legislation should be founded (p. 1069).

C—D—E

English News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

The Manchester Mistake.

In last week's "Summary" paragraph referring to the mistake which occurred at the Manchester Union Workhouse Infirmary at Crumpsall, it was inadvertently stated that "two patients in the Manchester Infirmary had been poisoned," &c. We desire to remove any impression which may have been formed in regard to the matter. It should be clearly understood that the mistake did not occur at the Manchester Royal Infirmary and Dispensary, but at the Workhouse Infirmary, which is generally known as the Crumpsall Workhouse Hospital.

Food-preservative Inquiry.

The Departmental Committee continued its sittings on Thursday and Friday of last week, when evidence was given by Messrs. James Brierley, F.C.S., public analyst for Southampton; W. F. Lowe, public analyst for Flintshire; Dr. Robinson, medical officer of health for East Kent; Dr. Wynter Blyth, public analyst for Marylebone; and Mr. Richard Bannister, late deputy-principal of the Inland Revenue branch of the Government laboratory. Again the line of examination adopted by members of the committee was chiefly in the direction of ascertaining from the witnesses their opinions in regard to regulation of the use of antiseptics, and on this occasion Sir Herbert Maxwell, the Chairman of the committee, and Professor Thorpe were the members who put most of the questions. Dr. Thorpe examined Mr. Brierley intimately in respect to his opinion as to the relative advantages of boracic acid and formalin as preservatives for dairy-produce. Mr. Brierley said that in Southampton there were chemists who were selling boracic acid without any instructions as to how it should be used. Dr. Thorpe thereupon asked him: "Surely formalin is by far the more potent as a drug?" Mr. Brierley replied that he did not know anything about its potency, and later explained that his knowledge in regard to formaldehyde was what he had been told by Dr. Samuel Rideal. Dr. Robinson stated in the course of his evidence that he had found boracic acid to give rise to illness. Witness's objections to the use of preservatives were chiefly based upon the possibility that many articles of food might be consumed on the same day containing boracic acid or salicylic acid, and thus one might get a large quantity in the course of a day. Dr. Wynter Blyth commenced his evidence by referring to colouring-matters in foods. He added he had found colouring-matter in sweetmeats, jams, and jellies. He had found colouring in Burgundy wine and aniline dyes in preserved vegetables, but in no instance had he found sufficient to injure health. He thought it would be possible to schedule injurious colours and to prohibit their use. He was also examined as to the use of copper salts in vegetables and regarding antiseptics. Mr. Bannister proved an interesting witness, and his examination commenced by some questions from the Chairman as to why mild-cured bacon should not be brought across the sea in refrigerators, to which he replied that the cost would be too great, and that it is impracticable to carry on the bacon-trade without the use of borax. He also considered preservatives to be necessary in the butter-trade. As to the use of salicylic acid, he stated that he knew one case of a prosecution for putting it in lager beer where a conviction was imposed, but the prosecution against a person using it in orange wine was dismissed. Mr. Bannister also considered that it would be a hardship if the use of copper to colour peas was prohibited, and stated as a fact that of the tinned peas sold by one firm 92.2 per cent. were copper tinted and 7.8 per cent. natural. This firm mentioned both kinds in its price-list, showing that the public demand was for the brighter-coloured article. Mr. Bannister had not the slightest doubt that it would be a good thing to state whether food-stuffs were artificially coloured or preserved. The committee adjourned till the middle of January.

Contract Accepted.

At the last meeting of the Guardians of the united parishes of St. Giles-in-the-Fields and St. George, Bloomsbury, the tender of Messrs. Burgoyne, Burdidge & Co., 12 Coleman Street, E.C., was accepted for the supply of drugs to the several establishments of the Board for twelve months.

British Optical Society.

The names of the following chemist-opticians appear in the pass-list of the last optical examination of this Society:—Mr. T. Mackenzie (Inverness), Mr. W. C. Gowans (Brechin), Mr. H. Groves (Blandford), Mr. J. H. Nicholson (Oswestry), Mr. D. Evans (Ruabon), and Mr. T. H. Wright (Leeds). The offices of the British Optical Society have been removed from Blackpool to Piccadilly Mansions, 17 Shaftesbury Avenue, London, W.

An x-Ray Club.

Six medical men at Enfield have, in conjunction with a member of the Cottage Hospital Committee, purchased a portable Röntgen-ray apparatus for 21 guineas. The apparatus is to be kept at the Cottage Hospital, and may be taken away and used by any of the members of the Club at a patient's house on payment of 1s. for one day's use, 2s. for the second day, and 3s. for the third day. The coil gives an 8-inch spark.

Sudden Death of a Lecturer on Chemistry.

On December 23 an inquest was held at the Marylebone Coroner's Court on the body of Dr. Richard Tayler Plimpton, aged 43, of 23 Lansdowne Road, South Lambeth. The deceased, who was the well-known lecturer on chemistry at the Middlesex Hospital School of Medicine, when hurrying to the lecture-room the previous Thursday, suddenly staggered and fell to the ground in an insensible condition. Dr. Bew at once went to him, and found that life was extinct. The *post-mortem* examination showed that death was due to syncope from fatty degeneration of the heart. The syncope was, no doubt, due to extra exertion from hurrying.

Jersey Mineral Waters.

Registration was granted by the Royal Court of Jersey on December 23 of the memorandum and articles of association of the Pure Mineral-water Company (Limited) on behalf of its founders—Messrs. James Hornell (mineral-water maker), Nathaniel John Prigg (grocer), T. Geo. Newman, John Tregear (grocer), John Samuel Prigg, and F. J. Bois and Geo. Walter Bois (solicitors). The capital of the company is 500*l.*, in 500 shares of 1*l.* each, and the vendor is Mr. Jas. Hornell, formerly a naturalist and director of the Jersey Aquarium and Biological Laboratory at Havre-des-Pas (St. Helier), which he transformed into a mineral-water factory during the past summer.

The Seller to be Prosecuted.

At an inquest held at Kingston-on-Thames on December 21, touching the death of a woman named Cavendish, evidence was given that deceased was found unconscious with a glass containing chlorodyne near her. The medical men who were called in treated her for opium-poisoning; and Dr. Cowan, at the inquest, stated that she had recovered from the opium poisoning, but died of cerebral apoplexy. In reply to the Coroner the husband said that he bought the chlorodyne in Lambeth Walk, and had done so many times before. The Coroner (Mr. Braxton Hicks) said the bottle was not labelled "Poison," and intimated that he would prosecute the seller. A verdict of death from natural causes was returned.

Carbolic-case.

A woman named Elizabeth Jones (30) was on December 19 found dead in her bedroom. In the room a bottle was found labelled "Carbolic acid," and the medical evidence at the inquest showed that death was due to carbolic-acid poisoning.

Stealing from a Chemist.

A series of robberies took place on the night of December 20, in various suburbs of Hull. At Keyingham the thieves broke into the shop of Mr. T. Charlton, chemist, and stole nearly 1*l.* in copper from the till. Other parts of the premises were visited and a bottle of wine carried off.

Too Young.

At the Southwark Police Court on December 23, Messrs. Dodd & Pywell, chemists and surgeons, Waterloo Road, were fined 11, and costs for employing a schoolboy named Oscar Janson, aged 12 years. Defendants' manager stated that he was told the boy was 14 years of age.

Irish News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Fires.

A serious fire broke out last week in the Government laboratory, Alfred Street, Belfast, in which the Chemico-Agricultural Society hold their meetings. Considerable damage has been done to chemical apparatus and other property belonging to the place.

On December 25 a destructive fire broke out in the oilcake and linseed-oil stores of Messrs. H. M. Leask, Sir John Rogerson's Quay, Dublin. The premises were gutted, the damage being estimated at 10,000l. The flames, which raged for several hours, were fed to a great extent by the ignition of several of the linseed-oil tanks, each containing 2,500 gals. of oil. The origin of the fire is not known.

Scotch News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Business Change.

Mr. Alex. McIntosh has been admitted into partnership by Messrs. Gibson & Co., chemists, 19 South Clerk Street, Edinburgh. Mr. McIntosh has for several years been one of Messrs. Gibson & Co.'s managers.

Aërated Waters for Hospitals.

The Hospitals Committee of the Glasgow Corporation have accepted the offer by the Volcanic Aëration Company, 203 Great College Street, Camden Town, London, to supply apparatus for the manufacture of aërated waters at the hospital at a cost of 54l. 8s. 6d., as also for the supply of 500 syphons and 50 cases for 49l. 11s. 8d.

Social Drugmen.

The employés of Messrs. Raimes, Clark & Co., wholesale druggists, Edinburgh, held their annual social in Trafalgar Hall, Leith, on December 15. Mr. R. Clark presided, and Messrs. Davies and Cunningham officiated as croupiers. After tea an interesting programme of vocal and instrumental music was carried through, amongst those contributing being Mdles. Amos, Barnetson, Clark, and Montgomery, Mrs. Donaldson, and Messrs. J. H. Davies, A. Donaldson, Gibb, and Jamieson. Miss Davies and Miss Hill were efficient accompanists. The programme included a cinematograph-entertainment. An assembly followed, Mr. Hutton acting as M.C., and dancing was kept up till the sma' 'oors.

Appointment of Glasgow Corporation Chemist.

At a meeting of Glasgow Corporation Police Department on December 26, the appointment to the newly-created post of Corporation chemist was made. The salary attached to the post is 350l. per annum, and the duties of the Corporation chemist (who has to devote his whole time to the work and to act under the direction of a special committee) include the examination of all materials of a chemical nature submitted to him by any Corporation Department and a report thereon. He may also be required to grant certificates under the Sale of Food and Drugs Act, 1899; to make such special chemical investigations as

may be required by the Corporation in connection with the work of the city; to give expert evidence in court when necessary; and "to do such other work as may be deemed proper by the Corporation." Fifty applications were received, six of these being from Glasgow. The list was reduced three successive times—first to twenty-three, next to fifteen, and latterly to the following seven gentlemen:—

Mr. E. T. Shelbourn, F.I.C., F.C.S., London County Council.
Mr. F. W. Harris, F.C.S., Corporation chemist and analyst to the County Council of the burgh of Burnley.
Mr. Edward Halliwell, F.I.C., chief chemical assistant to the West Riding of Yorkshire Rivers Board.
Mr. Thomas S. Goodwin, F.C.S., F.R.S.E., Professor of Chemistry and Toxicology, Glasgow Veterinary College.
Mr. T. R. Marshall, D.Sc. University of Edinburgh, teacher of Chemistry.
Mr. James Robson, F.I.C., F.C.S., chief assistant to Dr. Henderson, Glasgow.
Mr. Andrew Scott, chemist, Eastern District Sewage-works, Glasgow.

To assist the committee in making a suitable selection, Professor Mills, of the Glasgow and West of Scotland Technical College, was appointed as technical expert to examine the seven candidates named and report as to their fitness and ability for the office. The committee, after hearing Professor Mills's report, unanimously agreed to recommend the appointment of Mr. F. W. Harris, Burnley; and the Corporation, at its meeting on December 26, unanimously approved of that recommendation and appointed Mr. Harris.

French News.

(From our Paris Correspondent.)

ROYAL VISITORS FOR THE EXPOSITION.—The house of the late Dr. Evans, the American dentist, in the Avenue du Bois de Boulogne, has been hired by the French Government for the accommodation of Royal visitors to the Exhibition.

A COINCIDENCE.—A marriage is about to take place, says a French paper, between the Countess Magdeleine de Caraman-Chimay and Count Joseph Hunyadi. There was quite another lady who for a time bore the name De Caraman-Chimay, and who afterwards married a gipsy named Rigo. It happens that Rigo's Christian name was Janos. Thus one Caraman-Chimay marries Hunyadi, and another marries Janos.

BENCHES BLOCK BUSINESS.—Some of the wide Boulevards of Paris are very suitable for placing benches or seats, and these are much appreciated by the lower class of Parisians as pleasant spots for resting and "taking the air." I was surprised, however, to learn a few days ago that some retail shopkeepers have a distinct objection to these seats being placed in front of their shops, as they find them a real block to business. A pharmacist explained to me that such a seat was put on the edge of the pavement opposite his shop last summer, and he had found it very detrimental. It seems that in the evening persons sitting on the bench (some of them possessing, perhaps, a certain fund of wit and very little tact) pass audible remarks on customers as they go in or out of the shop, with the result that the pharmacist has found his evening takings gradually decreasing. He has petitioned the "City Fathers" to have the nuisance removed.

A LEGACY-CASE of some interest was heard recently at Bayonne. A M. Crouzet, schoolmaster, who died some time ago, had made a will, executed two months before his death, in which he named his friend M. Felix Moreau, pharmacist, at Biarritz, at his sole heir. Mlle. Serres, a near relation of the deceased, sought to invalidate the will on the ground that the French law provides that doctors of medicine, surgeons, and pharmacists who have treated a person during the malady of which he dies cannot inherit under a will made during the course of such malady. The case turned on the question as to whether the pharmacist could be considered to have treated M. Croquet as a patient in the way implied by the law. The case was sufficiently com-

plicated to make the result doubtful, but the Judge decided that the pharmacist who supplies medicines on a doctor's prescription is not incapacitated thereby from inheriting under a will. In order to come within the meaning of the law it must be shown that he had directed the treatment of the patient by giving him advice, continual care, and in himself prescribing the remedies used. Judgment was given in favour of the pharmacist, with costs.

CONTROVERSIES BETWEEN CUTTING PHARMACISTS and non-cutters, in the form of letters to the local papers, take place periodically. The town of Bar-le-Duc has recently given an example of a newspaper discussion of the kind. In the first place, a M. Dupouy published an article saying that a profession formerly honoured and respected has had discredit thrown on it by the cheap pharmacies. This was followed by a letter in defence from a M. Mille stating that the *grandes pharmacies* were able by a larger trade to buy direct from the producers, and cheaper than their smaller colleagues, and advocating small profits and quick returns. These statements have been replied to by a M. A. Débordes, "pharmacien de première classe." This reminds one of the tendency to the use of the expression "commercial pharmacy" which seems to be extending. A few years ago a Paris pharmacien who had adopted that title had his shop attacked and stoned by a band of students.

THE PHARMACIEN'S OATH.—Reference was made in the *C. & D.* of July 1 to the curious form of oath which French apothecaries were required to take in olden times, in which they swore, amongst other things, to do all they could for the honour, glory, ornament, and majesty of medicine, and it is also interesting to note that, according to the often-quoted law of 21 Germinal, Year XI., which is yet in force, French pharmacists are still required to take oath before commencing business. But this particular article of the law is principally remarkable from the fact that few, if any, pharmacists comply with it, and the Prefects of Departments, whose business it should be to see it carried out, either ignore it altogether or allow it to remain in abeyance. It is now some years since the question was raised. On the last occasion a doctor was prosecuted at the instance of a pharmacist for illegal practice of pharmacy. The doctor appeared in court and produced his pharmacien's diploma, but he was sentenced to a nominal fine, not for illegal practice, but because he had not taken the required oath in connection with his diploma.

LADY PHARMACISTS FOR COUNTRY VILLAGES.—A lady writer in *Le Pain* (whose anxiety to serve her sex possibly is greater than her knowledge of the existing condition of French pharmacy) suggests that while the strain and the hours of a city pharmacy must fatigue a woman, there are excellent openings in the country. "In the little place where I live," she writes, "I am assured that a pharmacienne could easily earn 200l. to 240l. a year; the outlay would be insignificant, as there is no goodwill to purchase. A person with a little capital might thus increase it, and at the same time do good, as no pharmacy exists at present." In the Arcadian spot where 200l. a year may thus be "honestly and easily earned by persons of both sexes," "the pharmacist would," she remarks, "doubtless indicate remedies for little ailments, give counsels of hygiene to families"—in fact, afford that gratuitous medical advice which the French peasant is a past master in obtaining. With feminine keenness the writer instances country pharmacists who (at least so her friends tell her) "leave the management of the *officine* to their wives while they go shooting, fishing, &c." Possibly the friends in question failed to point out that the sinning male pharmacist is legally responsible for any error made by his wife during his absence. I have never seen a woman behind a drug-counter in a country pharmacy, and doubt whether any French pharmacist who values his business would leave his wife in charge except during the slackest of business-hours.

LONDON COLLEGE OF PHARMACY.—The College dinner and distribution of prizes will be held at the Holborn Restaurant on January 22. T. Skewes-Cox, Esq., M.P., J.P., will preside. Students and friends wishing to attend are requested to communicate with the Principal as early as possible.

Colonial and Foreign News.

SHORT HOURS IN BERLIN.—The *Phar. Zeit.* reports that 432 apothekers have signed the petition for closing pharmacies at 9 o'clock which was started by a few assistants.

NO COLOURS ALLOWED.—Austrian manufacturers of mineral waters to the number of 120 have petitioned the Government to permit coal-tar colours to be used for colouring lemonade.

RESULTS OF TAXATION.—There is announced for sale at Rio a soap, perfumery, chemical, and aerated-water factory, all of which may be had at \$30,000. The original cost of the factory was \$150,000. This is said to be one of the results of President Campos Salles's taxation policy.

TO ENLARGE SODA-ASH PLANT.—The Solvay Process Company gives out information that the present great soda-ash works in Delray, a suburb of Detroit, is to be entirely duplicated. The present plant is eight storeys high, 30 by 400 feet. The output at present is 250 tons per day.

A PHARMACEUTICAL PENSION-SCHEME.—A Swedish royal edict states that after the year 1920 every pharmacist to whom a business has been granted will, on reaching a certain age, renounce the same, receiving at the same time a pension. Further regulations are to follow, and towards the pensioning each pharmacist will contribute a yearly sum to be fixed by the King.

NEW PROCESS FOR REFINING INDIGO.—From Yokohama we learn that Professor Nagai is said to have completed a new process for refining indigo. He has been carrying on a series of experiments at Tokushima, and comparative tests are now being made of the dyeing-material prepared according to his methods and that procured from India. The Nagai indigo is to be called Awa Nagai Seivan.

DRUG-CLERKS WANTED.—In St. Louis, according to the *American Druggist*, there is a great scarcity of competent drug-clerks, causing no little inconvenience to the proprietors of pharmacies. This condition has existed for several months, and is growing worse. The manager of the Employment Bureau of the St. Louis Drug-clerks' Society says that six different calls for competent clerks had been received by him recently, and he was unable to find a man to fill one of them.

PHARMACY IN HOLLAND.—At the latest sittings of the Dutch Lower House pharmacy questions were discussed. Dutch pharmacists are complaining of disloyal competition from non-pharmacists and companies. In future, therefore, a record will be kept of all such transgressions, and the statutes of company-pharmacies will also be critically examined to see that they correspond with the laws in force. In any doubtful case permission to practise will not be granted.

PHARMACY IN SPAIN.—The Spanish Pharmaceutical Assembly has carried a resolution by which supernumerary military pharmacists may work in a civil pharmacy, as it is permitted that military doctors, advocates, &c., also do business on their own account.—The sanitary law is to be amended so that provincial Colleges of Pharmacy shall have the right to put medicine-chests (containing medicaments for urgent cases) in places not possessing a pharmacy. They will have to be kept in order by a pharmacist, and will be under the usual regulations.

BULGARIAN RESTRICTIONS.—According to a new law in Bulgaria a druggist's business may only be managed by an examined pharmacist, who must be a Bulgarian subject. Other owners must engage a pharmacist as responsible manager. Pharmacies are now permitted in urgent cases to give medicine without the prescription which in ordinary circumstances would be given. To allow more than 30 per cent. off the official medicinal tax-prices is prohibited, and the pharmacies in larger towns only are allowed to keep "practicants." In others this is only allowed when more than 6,000 prescriptions are yearly made up.

A HEADACHE-POWDER CASE.—A case which has excited considerable interest amongst druggists in Western Pennsylvania was heard at Pittsburg on December 2. Mrs. Mary

West sued Louis Emmanuel, a well-known Pittsburg druggist, for \$20,000 damages for the death of her daughter, which was caused, she alleged, by an acetanilide powder obtained from Emmanuel's store. The defence was that the powder, called "Kohler's Headache-powder," was not purchased from the defendant or any of his staff, and a compulsory non-suit was granted. It is not expected that the case will be appealed.

BRAZILIAN CUSTOMS TARIFF.—With reference to the notice respecting changes in this tariff already published, the Board of Trade have now received translations of these articles in the new tariff-law by which modifications likely to be of importance to British trade have been effected in the duties leviable, and also of such articles in the said law, and in the revenue and consumption laws promulgated at the same time, as have reference to the formalities and regulations affecting British shippers and exporters. These translations may be consulted, by interested persons, at the Board of Trade, 7 Whitehall Gardens, S.W., on any day between the hours of 11 and 5.

American News.

(From a New York Correspondent.)

MR. H. T. DURANT, who left "the Square" to take up assay-work with the Jumpers Gold Mining Company of the Transvaal, recently passed through New York *en route* for Mexico, where he will take charge of the chemical-department of the Jumpers Company's Mexican mines.

LINSEED-MEAL.—An ingenious method of sophisticating this product is being practised. The cake left after expression of the fixed oil is triturated with a petroleum oil of about the same density as linseed-oil, and the mixture is sold as "pure crushed flaxseed." Assay will, of course, show the full amount of oil, but the adulteration is liable to be overlooked unless the oil be examined.

THE VICE-PRESIDENCY.—Mr. Timothy L. Woodruff, President of the Maltine Company, and now Lieutenant-Governor of the State of New York, is being prominently mentioned for nomination on the Republican ticket as Vice-President of the United States. The election takes place next year, and Mr. McKinley will be re-nominated for President. Mr. Woodruff will have the solid support of the Eastern States at the next national convention.

DENTISTRY IN TEXAS.—A Bill for regulating the practice of dentistry in the state of Texas was recently introduced into the state Legislature. Opposition rapidly developed, and came to a climax when a sturdy individual of the backwoods-type arose and said that he "Didn't believe in putting no obstacles in the way of no man, and this here examination-business was all rot. Every man had thirty-two teeth, sixteen in the upper jaw and sixteen in the lower, and anyone could learn all about dentistry in two weeks." Needless to say, the Bill was killed.

LIQUID-AIR COMPANIES are springing up in various parts of the country. These companies are to manufacture liquid air and revolutionise (on paper) the motive power of the railroads, street-cars, &c. They also propose to supply families with the fluid for the purpose of cooling their houses in summer and for use in refrigerators. They claim to have a number of patents for motors and refrigerating-plants, and by judicious advertising succeed in gulling a considerable number of people to purchases of stock. One of the most successful ventures was in Arizona, where the people subscribed liberally, evidently under the impression that the magnificent air of the country could be supplied in cans to far-off cities and countries. It is the acetylene swindle over again.

ADVERTISING POSTERS.—On the days of the Dewey celebration the Abbey Effervescent Salt Company secured a number of "sandwich" men, who carried aloft posters containing a portrait of Admiral Dewey and the words "The Salt of Salts." Underneath appeared the sign "Abbey's Effervescent Salt;" this attracted much favourable comment. A retail druggist recently had his window covered with lumps of coke, and in the centre a large coke cavern prettily lit with coloured electric globes. In the centre was

a bottle of "Coke's Dandruff Cure." The effect was curious, but very attractive. The Maltine Company recently ran an advertisement in the medical journals illustrating a bottle of maltine and coca-wine, with the words, "The coca boosts the patient and the maltine is the peg which prevents him from slipping back."

THE OXYGEN-HABIT.—The United States probably contains more morphine, opium, cocaine, and tobacco fiends than any other civilised country. The introduction of oxygen-gas as an adjunct to the treatment of certain diseases has been the signal for the introduction of the "oxygen-habit." In New York parlours are fitted up, where the *habitués* may go and get their daily inhalation of oxygen. The effects of long-continued inhalation of this gas are in every way comparable with those of morphine, but the after-effects are much more depressing and dangerous to the system. The oxygen-fiend can be recognised when under the influence of the gas by his high colour, sparkling eyes, and *bon camaraderie*. Nothing seems to dull his high spirits, and he is not inclined to be quarrelsome. Afterwards he is a worse-looking object than the morphine-fiend.

THE VAUDEVILLE CHEMIST.—This is an individual with a smattering of chemical knowledge and a gift of the gab, who is employed to tour the country and give lectures on the most recent discoveries in chemistry—that is where they can be applied to stock-jobbing purposes. At the time of the acetylene-boom some years ago this scheme was worked to perfection. Lectures were given before scientific bodies, and to the general public, profusely illustrated with experiments showing all stages in the manufacture and liquefaction of the gas, and striking experiments with the liquefied gas. The question of cost was tenderly touched upon, and the statement that carbide of calcium could be produced at \$5 per ton secured enormous subscriptions to various acetylene companies. The result is history. The Vaudeville chemist is now doing precisely the same with liquid air. It is a profitable scheme, and is recommended to the fellows of learned societies who claim that science brings but little financial reward to its devotees.

RUBBER-TREES.—The Department of Agriculture has recently issued some valuable information on the subject of rubber-trees. Experiments in India with certain species were not successful, owing to the fact that the trees did not develop the characteristic lactical ducts. In the light of the work of the department's experts this was due to error in selecting the variety. Unless care be taken in this direction failure will result in securing rubber, even though the trees may apparently grow well. There are four varieties of rubber-trees, which must be utilised according to the soil and climate of the place of cultivation.

(1) *Castilloa elastica* grows well and produces rubber in places where the climate is hot, humid, and the soil drained.

(2) *Hevea brasiliensis*, if the climate be hot, humid, and the soil swampy or covered with water.

(3) *Manihot Glaziovii*, the Ceara plant, if the climate is hot and the soil dry, sandy, or stony.

(4) *Sapium biglandulosum*, in temperate or cold climates such as Florida, Louisiana, &c.

The last variety is especially suitable for growing on coffee plantations.

ADULTERATION OF FOOD AND DRUGS is attracting considerable attention just now in view of the Senate inquiry into the subject. Some remarkable evidence has been produced, particularly with reference to the use of preservatives for food products. This practice seems fairly universal, salicylic acid being used for preserving meat, beer, canned goods, fruits, and preserves, while borax and boric acid are used to an enormous extent in packing meats and butter for shipment. One of the worst cases brought to light was a flour-adulterant advertised by a Chicago firm, which on examination was found to be simply powdered white clay. Samples of cream of tartar containing as much as 50 per cent. of plaster of Paris are common. In the drug line outside of spices, which are never sold in the pure state, essential and fixed oils are largely adulterated; in fact, many dealers prefer an oil of lemon containing turpentine to the genuine article. Calamine is invariably composed of barium sulphate and iron oxide, tallow is a common ingredient of the "finest" beeswax, and powdered drugs contain a multitude of strange tissues. It is hoped that legislation to protect the public against such impositions will shortly be enacted.

War Notes.

THE ANNUAL BALL of the Plymouth, Devonport, Stonehouse and District Chemists' Association, which was originally fixed for January 12, 1900, has been postponed on account of the war.

FREE MEDICINES.—At the annual dinner of the Kirkcaldy and District Medical Association it was agreed to give free medical attendance to the dependents of the Reservists who have been called to the front. In like manner the whole of the chemists of Kirkcaldy have intimated that they will supply medicines free of charge.

HORSE-SICKNESS has broken out amongst the horses engaged in the campaign in South Africa. So one of Monday's telegrams states. This reminds us of one of the many details which the War Office has had to consider, and for which it receives little credit. The Veterinary Department has prepared a little pamphlet of fifty-six pages entitled "Suggestions for the General Management of Horses, Mules, and Oxen while on Field Service in South Africa, with Notes concerning their more Common Ailments." The veterinary surgeon who wrote it has had experience in South Africa, and has succeeded in giving very concise information on the subjects dealt with, amongst them being horse-sickness, sore eyes, and similar disorders which specially affect horses and other beasts of burden in South Africa. The pamphlet is exclusively for the use of troopers and others, and is not for sale.

IMPERIAL VOLUNTEERS—Among the contributions to the City of London Imperial Volunteers is one of 1,010 field-dressings and identification-tallies from Messrs. S. Maw, Son & Thompson. A field-dressing is to be stitched inside the tunic of each Volunteer. The identification-tallies are used in case the wearer gets wounded, and are filled in with particulars of the injury and treatment, so as to avoid unnecessary handling in case of severe wounds. The same firm have also offered at a nominal price a surgical equipment for the use of the corps, consisting of a field-companion which the surgeon-bearers carry, five fitted haversacks, five stretchers of galvanised forged iron and ash poles, five tinned-copper water-bottles, and five sets of cane splints. The complete outfit is arranged in accordance with the War Office requirements, and has, since we inspected it, been accepted by the Lord Mayor.

SIR WILLIAM MACCORMAC has written an exceedingly interesting letter from South Africa to the *Lancet* regarding his experiences at the seat of war. He refers to a visit which he paid to the General Hospital at Wynberg, of which our Cape correspondent has already sent us some notes, and then goes on to describe the nature of the wounds inflicted by the Mauser bullets, seventeen cases being briefly detailed. He also describes a hospital train similar to the one figured in *THE CHEMIST AND DRUGGIST* of December 16, page 978, which contains a pharmacy-waggon as well as a kitchen-waggon. There is little in the letter of direct pharmaceutical interest, but we commend a perusal of it to those who are interested in surgical field-work, and congratulate the *Lancet* on its enterprise in securing so important a correspondent. Sir William Stokes, of Dublin, has volunteered for service as a surgeon, and has left for the Cape.

ARMY-COMPOUNDEES' ENLISTMENT.—There is a plethora of Minor and Major men for the appointments in the Royal Army Medical Corps as compounders of medicine for service with the African Field Force in South Africa, to which reference was made last week. Ten is the number which the authorities ask to be supplied from the London district, and we are informed by the Recruiting Staff Officer at St. George's Barracks that personal and written applications have poured in upon him. "I am sending out nearly sixty notifications to applicants that the vacancies are all filled for this centre, and many who have called here this last few days have been bitterly disappointed that their services would not be required." St. George's Barracks, W.O., is the recruiting-office for this branch of the service for London, and we understand that the letters of application which were sent to 18 Victoria Street, S.W., as notified in our last issue, have been forwarded there and duly considered. Those who are

still desirous of enlisting as compounders may have a chance by applying to the Recruiting Staff-Officer, Royal Army Medical Corps, Liverpool, Manchester, Birmingham, and Edinburgh respectively, but our inquiries indicate that there is little chance now for chemists' assistants getting to the front in this capacity.

CHEMISTS' ASSISTANTS FOR THE FRONT.—Ten chemists assistants left Edinburgh—four of them on Monday night, and six on Tuesday night—for Aldershot, en route for service as compounders in the Royal Army Medical Corps with the South African Field Force. They were chosen by the military authorities from among over two hundred who gave a ready response to the advertisement calling for volunteers for this service. Their names are:—J. R. Y. Bowman, son of Mr. Bowman, chemist, Leith; J. D. Horsburgh, Morningside, Edinburgh; R. Cummings, Perth; John Maclean, Melrose; D. M. Robertson, Old Machar, Aberdeenshire; G. B. Mitchell, Duddingston, Edinburgh; G. Macdiarmid, Kildrummie, Aberdeenshire (assistant to Mr. C. F. Henry, Edinburgh); Wm. S. Hogg, Musselburgh; J. W. Center, Edinburgh; and John Nulty, Dundee. The conditions of service are those which we published in our last issue. The military authorities seem to have regarded chest-measurement and other physical points as of more importance than qualification as dispensers. At least five of those accepted are unqualified assistants, and quite a number of qualified men were kept back on account of their chest-measurement not being up to the standard, for defective teeth, and so forth. A very large number of those who applied were medical students, who sought to come within the conditions by presenting their materia-medica certificates, but these were refused, men of practical knowledge being required. The volunteers, who were in excellent spirits, were accompanied by a large number of friends to the station, who gave them a hearty send-off. Mr. H. Sanderson, of Wakefield (Minor 1894) has also volunteered, and been accepted.

Business Changes.

Notices of changes in the retail trade, and opening of new businesses, are inserted in this section free of charge, if properly authenticated.

MESSRS. O. GROSS & Co., late of 9 Mincing Lane, have removed to 9 Savage Gardens, E.C.

MESSRS. ALLISON, JOHNSON & FOSTER (LIMITED), manufacturing chemists and wholesale druggists, Hull, have opened a London office at 61 Mark Lane, E.C., under the charge of Mr. James W. Epps, F.C.S.

THE OLD-ESTABLISHED BUSINESS of Messrs. Wrantham & Hardy, chemists and aerated-water manufacturers, Wheelgate, Malton, has been taken over by Mr. George Wray (formerly manager) and Mr. J. P. Thompson (formerly assistant), and will in future be carried on under the style of Wray & Thompson. The business was founded ninety years ago by Mr. Joseph Wrantham, and was carried on after his death, by his son Joseph, who took his nephew, Mr. George Hardy, into partnership in 1873. On the death of Mr. Joseph Wrantham the younger Mr. Hardy acquired sole control, and also took over the business of Mr. Atkinson, Commercial Street, Norton, which he sold eventually to Mr. J. Spanton. A few years later he bought and developed an aerated-water business and the business of Mr. Chas. Hartley, chemist, which he incorporated with his own. After forty-one years' trading Mr. Hardy now retires into private life, and he informs us, in an interesting note, that the firm have taken the *C. & D.* since its inception, when the present mammoth periodical "was nothing more than an interesting price-list."

A GERMAN APOTHEKAR recommends liniment of scap for removing stains produced by aniline colours.

A MAN came into our editorial room the other day, put this before us, and fled:—"Of all classes of dress, which produces the most humorous effect?—The pharmaceutical (the farmer's suit tickle)." He is still at large.

Winter Session.

Advance notices of the meetings to be held are inserted under "Coming Events." Secretaries are requested to send such notices not later than Wednesdays of the weeks before the meetings are to be held.

The Optical Society.

A MEETING of this Society was held on December 21. The SECRETARY announced that donations of books towards the library had been received, including two volumes on "Optics" and "Sight" from Mr. C. F. Forshaw. A resolution was passed that members who paid their subscriptions at the formation of the Society in June or since should only be called upon to pay half-a-guinea for the year 1900. Sir Howard Grubb was balloted for, and elected a member. Mr. LIONEL LAURENCE then read a paper on

OPTICAL STANDARDS.

One of the objects of the Society is to promote the establishment, adoption, and recognition of standard sizes for the optical trade, and this paper was the first contribution to the subject.

The Angle Notation which Mr. Laurence recommended was that in which the zero is numbered from the right-hand side of the eye. This system, he said, was already the standard in Canada, and to some extent in the U.S.A., India, Central and South America, the West Indies, and Australia. It was also the ordinary trigonometrical notation of angles.

Spread-rules.—With a view to standardising spread-rules, which at present vary in nomenclature and lettering, Mr. Laurence proposed to indicate the spreads by numbers 1 to 9, and to let each spread be made 1 c.m. deep, standardising to consist of a definite width being given to each spread at 2 mm. and at 7 mm. from the vertex of the arch. No. 1 has a width of 5 mm. at 2 mm. from the vertex of the arch, and a width of 7 mm. at a distance of 7 mm., the spreads to increase regularly by 1 mm. at the higher, and by 2 mm. at the lower position, up to 13 mm. and 23 mm. (No. 9).

Calibration of Lenses and Frames.—This it was proposed to do by taking the circumferential measurements, and, as eye-wires "give" to a certain extent, to thus allow various forms of lenses to be equally standard on the basis of a given circumference of a circle. From the approximate circumference and diameters of the lenses and eye-wires in common use the following circular measurements in mm.'s were found:—No. 1, 92; No. 2, 95; No. 3, 97.5; No. 4, 102.5; No. 5, 105.5; No. 6, 113; No. 7, 117; No. 8, 129.5; and No. 9, 135. The measurements are only approximate, and require further verification.

Coloured Glasses.—The standard suggested for smoked glass is one which reduces by one-half the intensity of transmitted light. For blue glass no scientific basis seemed available, so it was proposed to select an arbitrary blue of a tint to correspond in depth with No. 1 smoked glass. A similar method was suggested for green glass.

The discussion on the paper was adjourned.

Glasgow Chemists and Druggists' Assistants' and Apprentices' Association.

AT the meeting held on December 22, Mr. J. P. Gilmour (President) being in the chair, Mr. M. MELDRUM, Ph.C., read a paper on "Reproduction in Plants," in which he traced the principles and processes of asexual and sexual biogenesis from the lowest to the highest plant-forms, with special reference to the phenomena of antithetic and homologous alternation of generations in the Pleidophyta, the homologies between the sexual organs of the two great sub-kingdoms of Cryptogamia and Phanerogamia, as showing their co-descent from a common ancestral form, and to the many curious and complex adaptations in the structure of flowers to ensure cross or self fertilisation. The author concluded by insisting upon the value of the principle of evolution as the master-key to the study of organic nature. The CHAIRMAN complimented the essayist, and he was followed by Mr. B. COCKBURN, who referred to the latest discovery as to the process

of the fecundation of the oosphere, explaining that one of the two generative nuclei developed in the pollen-tube fused with the nucleus of the ovum, but the destination of the other had hitherto been unknown. It had now been ascertained that it fused without previous division with the central or secondary nucleus.

Sheffield Pharmaceutical Society.

A LECTURE was given on December 20 to the members of this Society by Mr. J. W. J. TURNER on "Fruits, rare and interesting." The President of the Society (Mr. George Squire) occupied the chair. The lecturer exhibited over forty slides illustrative of different foreign fruits, and explained their structure and their uses. His lecture was given with a view to drawing attention to many fruits that are not met with in commerce, and Mr. Turner said one reason, perhaps, why we in England did not get so many succulent fruits was because they would not stand transit. The lecture proved very interesting, and Mr. Turner was warmly thanked at the close.

Personalities.

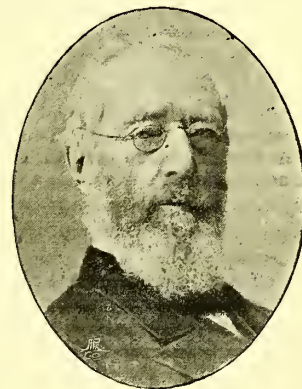
MR. JOSEPH WORMALD, wholesale druggist, Manchester, has retired from business.

MR. J. ALAN MURRAY, B.Sc., F.C.S., has been appointed analyst under the Fertilisers and Feeding-stuffs Act to Montgomery County Council.

CAPTAIN J. A. HORTON, chemist and druggist, Bucksburn, N.B., has been gazetted to the rank of Hon. Major of the 4th (Deeside Highlanders) V.B.G.H.

THE CAMBRIDGE UNIVERSITY General Board of Studies have reappointed Dr. S. Ruhemann, M.A., of Gonville and Caius, University Lecturer in Organic Chemistry till Michaelmas, 1904.

WE now give a more recent portrait of the late Professor J. F. Hodges, M.D., of Belfast, whose death was recorded in our last issue. We learn from our Belfast correspondent that the death of Professor Hodges is much deplored in the city. He had been so long identified with the Queen's College there, and his work in connection with agricultural chemistry had been so beneficial in results to farmers in Ulster, that his loss is widely felt, although it was not unexpected. Professor Hodges was an analyst of repute, and was at one time on the council of the Institute of Chemistry.



IN the list of chemists who passed the Spectacle-makers' Company's examination published in the *C. & D.*, December 16, the name of Mr. H. A. Travis, Chorlton-cum-Hardy, Manchester, was unintentionally omitted.

MR. THEOPHILUS NICHOLLS, of South Hackney, writes to say that it was he, and not Mr. Urwick, who relieved the tension at the "Camwal" meeting by explaining that a public institution is an institution governed by a public body.

COUNCILLOR A. E. EKINS, pharmaceutical chemist, St. Albans, is a strong advocate for the adoption of the bacteriological sewage system by the St. Albans Town Council. The sewage-question has been agitating the minds of the inhabitants for some time past, and an interview with Mr. Ekins on the subject is published in a recent issue of the *St. Albans Advertiser*.

Legal Reports.

Merchandise-marks Act.

POTASH-WATER.

THE Chemists' Aerated and Mineral Waters Association (Limited), Caledonian Road, N., were summoned at Swindon Petty Sessions on December 21, for applying a false trade-description to a syphon of aerated water supplied to William Evans, chemist, Swindon. Evidence was given that the label on each syphon represented that the water contained 5 gr. of bicarbonate of potash to each pint, and the analysis (see below) had shown that the syphon contained no potash, but a proportion of soda. It was urged for the defence that inadvertently a potash-water label had been placed upon a soda-water bottle. In support of this statement evidence was given by Mr. Richard Robinson Groom, the company's Bristol and Birmingham manager, who stated that written instructions had been given to the foremen with the object of securing the proper preparation of the various waters. After the Bench had consulted, the Chairman said they found that soda-water was sold in place of potash-water, but were advised that on that finding they could not convict. They would be willing, however, to state a case if it was thought desirable to take it elsewhere.

A second summons was heard against the company for applying a false description to a syphon supplied to Joseph Henry Green (see opposite column). Dr. Dyer said the sample which he had examined in conjunction with Mr. Stoddart was practically destitute of bicarbonate of potash, but contained 2 gr. per pint of bicarbonate of soda. A fine of 10s. and costs was imposed.

Sale of Food and Drugs Act.

CAMPHORATED OIL.

AT Hinckley on December 21, Wm. Pridmore, chemist, pleaded guilty to selling camphorated oil deficient by 2 per cent. of camphor. The Chief Constable said he had no desire to press the case, and only asked for a nominal penalty. Defendant's solicitor said his client could only explain the absence of 2 per cent. of camphor by evaporation in heating the oil for the purpose of dissolving the camphor, and the Bench dismissed the case on payment of costs.

A similar charge against Thomas Pratt, grocer, also of Hinckley, was dealt with in a like manner.

AT the Coalville Petty Sessions on December 22, Thomas Dodd, chemist, Withwick, was summoned for selling camphorated oil below the standard. The defendant admitted the offence, but said he was not aware at the time of the sale that the oil was not in accordance with the B.P. The chief constable said he did not wish to press the charge, and further stated that out of thirty samples taken for analysis in the county, that sample was the worst. A fine of 5s. 6d. and 1l. 6s. 6d. costs was inflicted.

CHARLES JOHN NATHES, chemist, of Kegworth, was summoned at the Loughborough Police Court, on December 27, for selling camphorated oil which contained only 17 per cent. of camphor. Defendant said the oil was properly made, but camphor being volatile and heat being required, he was surprised that the deficiency was not greater. In future he would make up the oil allowing for volatilisation. A fine of 2s. 6d. was imposed.

POTASH WATER.

AT Swindon Petty Sessions on December 21, the adjourned case (see *C. & D.*, December 2, page 907) was heard against William Evans, chemist, Market Street, New Swindon, for selling potash-water containing no potash. Dr. Bernard Dyer now deposed that he had made a joint examination with Mr. Stoddart of the portion of the syphon purchased, and both had found it to be practically destitute of potash, but to contain soda in the proportion of 5 gr. to the pint. For the defence, it was suggested that, in view of the divergence of opinion on the part of the analysts as disclosed

at the last hearing, the Magistrates ought not to convict. The Chairman said he fully understood that the case was to stand or fall by the final analyses which should take the place of an analysis by Somerset House. The Bench were unanimous in convicting, and imposed a fine of 1s. and costs.

JOSEPH HENRY GREEN, chemist, Wood Street, Swindon, who was previously summoned for a similar offence, now pleaded guilty, and a like penalty was inflicted.

GOLDEN SYRUP.

AT Durham County Police Court on December 20, Messrs. Pearman & Corder, wholesale druggists, Sunderland, and Messrs. Davison & Pickering, wholesale grocers, Newcastle-on-Tyne, were each fined 10l. and costs for selling golden syrup adulterated with glucose. In the latter case it was urged for the defence that across the top of the tin containing the syrup was a label as follows:—

Owing to the richness of the sugar from which our syrups are made, a proportion of grape-sugar, or glucose, is added to prevent crystallisation.

The county analyst was of opinion that it was absurd to talk of the addition of glucose to prevent crystallisation.

Bankruptcies and Failures.

Re GEORGE D. KIRKNESS, Helensburgh, Chemist and Druggist.

AT the meeting of creditors of this debtor held on December 21 at Kilmarnock a statement of affairs was submitted showing the estimated assets to be 446l. 13s. 10d., and after deducting preferable debts, 57l. 19s., there remains 388l. 14s. 10d. The ordinary claims amount to 1,102l. 9s. 6d., so there will be a deficiency of 713l. 14s. 8d., or an apparent dividend of 7s. per pound, subject to the expenses of administration.

Re MORGAN M. D'ARCY, Main Street, Tipperary, and Cahir Pharmaceutical Chemist.

THE following are creditors of this petitioning debtor:—

	£	s.	d.
Allen & Hanburys, London	...	32	7 4
Allen, A. M., & Co., Glasgow	...	9	3 4
Atkinson, J. and E., & Co., London	...	5	16 1
Ayrton & Saunders, Liverpool	...	80	0 0
Bishop, Alfred, & Sons, London	...	9	2 7
Battle, Maltby & Bower, Lincoln	...	9	18 0
Bible Bros., Cork	...	6	0 0
Boileau & Boyd (Limited), Dublin	...	226	0 0
Boyd, J. and G., Limerick	...	63	12 3
Clarke, John, Belfast	...	10	15 9
Clarke, J., & Co. (Limited), Dublin	...	81	1 11
Cooper Nephews, Berkhamstead	...	12	8 0
Coman, William, Tipperary	...	17	18 9
Crosfield, Joseph, & Sons, Warrington	...	8	2 6
Crown Perfumery Company, London	...	10	11 3
Cresswell Bros. & Schmitz, London	...	8	0 4
Dalton, L. J., Tipperary	...	20	0 0
Day, Son & Hewitt, London	...	10	0 0
Dalmas, A. de St., Leicester	...	14	6 11
D'Alton, Michael, Tipperary	...	56	15 0
D'Alton, John, Tipperary	...	73	5 0
English, Tobias, Tipperary	...	15	5 0
English, T. and J., Tipperary	...	11	11 4
English, Mrs. G. W., Tipperary	...	7	11 4
Evans, J. P., & Co., Limerick	...	7	16 1
Fletcher, Fletcher & Co., London	...	6	10 1
Fitzgerald, James J., Tipperary	...	40	0 0
Haslam, W. H., Tipperary	...	15	6 2
Horner & Sons, London	...	45	5 10
Hoyte & Sons (Limited), Dublin	...	34	2 9
Jeyes' Sanitary Compounds Company, London	...	6	4 0
Kennedy, M., & Son, Dublin	...	6	0 6
Kirby, John B., Tipperary	...	20	0 0
Maloney, Mrs., Gorey	...	25	0 0
McMaster, Hodgson & Co., Dublin	...	5	0 0
McGrath, Mrs., Tipperary	...	7	1 1

	£	s.	d.
Millea, John, Tipperary	20	0	0
Merrick, John, Cahir	15	0	0
Morrissey Bros., Clonmel	5	0	3
Moloney, Daniel, Knocklong	35	0	0
O'Driscoll, J. J., Tipperary	68	0	0
O'Neill, James, Tipperary	15	5	9
O'Neill, Timothy, Clonmel	17	10	10
Parke, Davis & Co., London	5	12	4
Peare, Charles, Tipperary	22	2	6
Pierce & Co., Wexford	23	0	0
Readon, W. H., Tipperary	74	0	0
Richardson, John, & Co., Leicester	12	18	7
Riordan, W. H., Tipperary	30	0	0
Robertson, James, & Co., Edinburgh	6	0	0
Ryan, Mrs. M. A., Tipperary	6	17	0
Sharp Bros., London	19	6	7
Sinclair, Phillips & Co., London	10	13	6
Smith & Co., London	16	0	0
Shuley, J., & Co., Dublin	14	11	2
Timpson, John, & Co. (Limited), London	5	6	2
Tunbridge & Wright, Reading	6	4	6
Woods, Webb & Co., Dublin	14	0	0
Webb, J. H., & Co., Dublin	8	8	8

FAILURES IN 1899.

Kemp's Mercantile Gazette, in a special supplement this week gives particulars of failures in all trades during the year. From this we learn that 61 chemists and druggists have failed, or two fewer than in 1898. We may explain that a chemist and druggist, according to Kemp, is anyone who deals in drugs. We note that 20 of the total failed in the first quarter of the year, and 22 in the last. Deeds of arrangement were signed by 44, or seven less than in 1898; and 118 (or ten less) gave bills of sale. The figures for bankruptcies and deeds apply to Great Britain. Regarding the figures for all branches the increased trade and prosperity of 1898 and 1899 are shown in the greatly reduced figures of the failures. The number of gazetted failures for the United Kingdom fell from the total of 5,207 in 1898 to 5,018 in 1899. Analysing these results, we find that in England and Wales the public bankruptcies sank from 4,298 in 1898 to 4,135 in 1899. There was a slight increase in the similar figures for Ireland, but in Scotland there was a decrease of 43, the comparative totals being 72 for 1898 and 659 for 1899. These returns are confirmed by the statistics relating to deeds of arrangement in England and Wales, which fell from 3,460 in 1898 to 3,217 in 1899, or a total reduction of 243, which is a very large percentage. If we look more closely into these statistics we shall see in which trades there has been most improvement. In the way of bankruptcy the greatest decrease was in the grocery and provision trades; next comes the drapery trades; and, thirdly, farmers. In the drapery, silk, and woollen trades, where the common method of dealing with failure is by a deed of arrangement, there was a falling-off of 112 cases, the totals being 711 and 599 for 1898 and 1899 respectively. In the grocery and provision trades, also, there has been much improvement under this form of insolvency.

Gazette.

PARTNERSHIP DISSOLVED.

Richardson, T. W., and Pritchard, E. L., under the style of Richardson & Pritchard, Norwich, surgeons.

THE BANKRUPTCY ACTS, 1883 AND 1890.

ADJUDICATIONS

Darrell, Harrington Wyndham, Norwich, doctor of medicine.
Jeanes, George, late of Liverpool, chemist.

New Companies & Company News.

HILLS, CHAPMAN & CO. (LIMITED).—Capital 65 000£, in 51 shares. Objects: To acquire the businesses of "Hills, Chapman & Co.," and the "Magnum Mineral Water Company," and to carry on the business of mineral-water manufacturers, distillers, chemists, druggists, &c. The first directors are C. T. Hills and W. H. Chapman (managing directors with 350£ each per annum). Qualification 50 shares. Remuneration of ordinary directors 100£ each per annum.

A. RIDDLE & CO. (LIMITED).—Capital 25 000£, in 11 shares. Objects: To acquire the business carried on at 36-8

Commercial Street, E., as "Alexander Riddle & Co.," "Stower's British and Foreign Wine Company," and "R. Wilkinson & Co.," and to carry on the business of manufacturers of and dealers in "Stower's lime-juice syrup," "Stower's lime-juice cordial," "Stower's lemon squash," and similar preparations. The first directors are F. Harris, E. R. Pugh, Rev. C. J. Stower, and B. W. Pugh. Qualification 100£. Remuneration 50£ each per annum.

CITRONIC WORKS COMPANY (LIMITED).—Capital 5,000£, in 11 shares. Objects: To acquire the business carried on at Hulme, Lancs, as the "Citronic Works Company," and to carry on the business of citronic ash manufacturers, chemists, druggists, drysalts, oil and colourmen, &c. The first subscribers are:—J. Winstanley, 36 Lincroft Street, Moss Side, Manchester, cashier; F. Brooks, Victoria House, Stockport, solicitor; B. Broadbent, Moorhurst, Kersal, Manchester, gentleman; W. H. T. Shepherd, 32 Saunders Street, Southport, estate agent; T. Weatherill, 23 Talbot Street, Withington, Manchester, bookkeeper; A. E. Maybury, 87 Sloane Street, Moss Side, Manchester, stationer; and F. Worthington, Richmond Lodge, Bowden, gentleman.

HUGH MOORE & ALEXANDER (LIMITED), DRUGGISTS, DUBLIN.—The directors of this company have declared an interim dividend at the rate of 5 per cent. per annum.

"CAMWAL" (LIMITED).—Mr. Butler, Secretary to this company, calls our attention to the fact that the issue of 160,988£ of shares, to which we referred last week, is to be in 132,968 11. ordinary shares and 700 50£ debentures, and not all 11. shares, as we made it appear. We further note that the total of the present capital to be written up is 78,843£. An extraordinary general meeting of the shareholders will be held at Anderson's Hotel, 162 Fleet Street, on Tuesday, January 9, 1900, at 3 P.M., when the resolutions passed at the meeting on December 19 will be submitted for confirmation.

Trade Notes.

ANOTHER SACCHARIN is offered to the trade. It is made by the Chemical-works formerly Sandoz, in Basle, by their own process, and they offer to protect purchasers of it against legal proceedings.

SALVO-PETROLIA.—The Dee Oil Company (Limited), 49 Lime Street, E.C., inform us that the War Office has accepted their free offer of as much Salvo-petrolia as the Red Cross Commissioner may require.

EQUISAN—Messrs. Corry & Co. (Limited), 91 Shad Thames, S.E., have brought to our notice "Equisan," a remedy for mange and skin-diseases in horses and dogs which possesses several advantages to recommend it. The preparation is vegetable and non-poisonous, and is cheap, selling at from 1s. the pint-bottle to 22s. 6d. for a 5-gallon drum. Three applications only are needed to effect a cure, and the hair rapidly reappears on the bald patches.

INCOME TAX REPAYMENTS.—The Income-tax Adjustment Agency, 12 and 13 Poultry, E.C., write to remind those who are now ascertaining the amount of their profits for the year 1899 that, if such profits show a diminution they may be entitled to the repayment of a considerable portion of the last income tax paid. They will be glad to advise any of our readers, gratuitously, whether they can make a claim for repayment, if they send the agency full particulars of their incomes and a stamped addressed envelope.

MESSES. MAY, ROBERTS & CO., druggists' sundriesmen, 9 and 11 Clerkenwell Road, E.C., have shown us an advance proof of their new price-list, which will be published on January 1, 1900, and we have had the opportunity of examining the additions and corrections made upon the last issue. These show that the work of preparing a new price-list is most laborious, and it is difficult for anyone who looks at the finished article to realise how much this means. Every section of the list—(1) Sundries and instruments of all kinds; (2) proprietaries; and (3) packed goods—has been thus revised, and our subscribers should ensure that they get a copy of the list by dropping the firm a post-card.

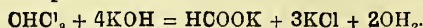
Tr. Chloroformi et Morphinæ Co. (B.P., 1898).

By J. H. COSTE, F.I.C., F.C.S.

THE examination of this preparation presents difficulties both on account of its complexity and the nature of some of its ingredients. The author has recently had occasion to examine samples of this tincture, and after experimenting in various directions is of opinion that the following scheme will be found tolerably satisfactory:—

Determination of Hydrocyanic Acid.—A portion of 10 c.c. of the tincture diluted to 100 c.c. with water and well agitated is filtered, after settlement, until 50 c.c. of filtrate has been collected. This portion is made alkaline, and titrated with volumetric solution of silver nitrate as described in the B.P. (acid. hydrocy. cil); 1 c.c. $\text{AgNO}_3 = 0.0054$ gramme HCN or 0.270 c.c. dilute hydrocyanic acid ($\frac{1}{2}$ c.c. of tincture should require 0.9 c.c. AgNO_3). Number of c.c. of AgNO_3 for 5 c.c. $\times 54 =$ c.c. dilute hydrocyanic acid per litre.*

Determination of Ether-extract and Morphine.—Another portion of 5 c.c. of tincture is diluted with about 50 c.c. of water, and shaken, after acidifying, with successive portions of 10–20 c.c. ether until no more colour is imparted to the ether or extracted from the liquid. The mixed ethereal liquid is washed once with water, the ether distilled off, and the residue dried at 100°C . to constant weight. Weight of residue $\times 200 =$ grammes of residue in 1,000 c.c. tincture. The aqueous liquid and wash-water should be mixed, and contain the whole of the morphine as hydrochloride with the glycerin. Extraction with both acetic ether and amyl alcohol was tried to extract the morphine (after basifying), but both these solvents removed a good deal of glycerin, which interfered with the gravimetric estimation of morphine. The following, however, seems to be fairly satisfactory:—The aqueous liquid is diluted to 500 c.c., and well mixed; 10 c.c. of this is put in a Nessler glass, diluted to 50 c.c.; 1 c.c. of dilute hydrochloric acid and 1 c.c. of a fresh solution of potassium ferricyanide and ferric chloride added. One cubic centimetre of a solution of 0.100 gramme pure morphine hydrochloride in 100 c.c. water (1 c.c. = 0.001 gramme hydrochloride) is diluted to 50 c.c. and treated in a similar manner at the same time, and the coloration of Prussian blue which appears and gradually deepens is compared with that given by the solution under examination. They should be equal; if not, 1.1 c.c. or 0.9 c.c. of the standard solution and 10 c.c. of the solution from the tincture should be compared, and so on until an exact equality of tint is obtained. Each 0.1 c.c. morphine solution equals 1 gramme per litre of hydrochloride in tincture. Time must be allowed for the colour to develop, and a fresh 10 c.c.† treated for each set of comparisons. Some idea of the amounts of alcohol and chloroform present may be obtained by distilling a measured quantity of the tincture from a flask with a thermometer until the temperature of the vapour reaches 100°C ; condensing the distillate and measuring the decrease in the total volume after shaking with dry potassium carbonate will afford some indication of the dryness of the alcohol. The chloroform can be determined in the distillate by heating a portion with alcoholic alkali under pressure to 100°C .

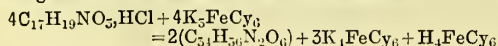


The chloride formed, or the loss in alkalinity due to formation of chloride and formate, may be determined. Either will give data for calculating the amount of chloroform.

The glycerin could be determined, after removal of the ether extract, by Hefner's method or by the drying method of Benz (*Zeits. Anal. Chem.* 1899, 38 [7], 433–8). It is probably sufficient to make a qualitative test for sugars which might be used as adulterants.

* It is more convenient to use a more dilute silver solution, say one-half or one-fifth the B.P. strength.

† Morphine is oxidised to oxydimorphine and the ferrocyanide formed gives with the ferric chloride Prussian blue



If oil of peppermint is ascertained by the nose to be present that is sufficient, as the quantity is too small (1.5 in 1,000) to estimate. The above methods are admittedly crude, but are probably sufficiently accurate for the purpose; great accuracy is not possible in the examination of such preparations.

The following figures of A, a sample known to be properly prepared; B, a sample sent for analysis; C, calculated from the B.P. formula, may be of interest:—

	A	B	C
Sp. gr. 15.5°C 15.5°C .	1.0117	1.0304	
	1,000 c.c. contains—		
Chloroform ...	65 c.c.	60 c.c.	75 c.c.
Morphine hydrochloride ...	9 grammes	10 grammes	10 grammes
Dilute hydrocyanic acid ...	63.5	60.8	50 c.c.
Ether extract dried at 100°C .	5.20	3.60	6.25 grammes
	(4.96) grammes (3.54) grammes		
Alcohol (dry), approximately ...	595 c.c.	560 c.c.	620 c.c.
Oil of peppermint	present	present	1.5 c.c.
Sugars ...	absent	absent	
Colour ...	a bright chlorophyll green	a darker chlorophyll green	

I think A must certainly be considered as satisfactory, but B would appear to be deficient in Indian hemp and possibly in capsicum.

Trade-Marks Applied for.

Anyone who objects to the registration of a trade-mark must address the Comptroller-General, Patent Office, Chancery Lane, W.C., within a month of the date of publication.

When "no claim" is mentioned in the subjoined abstracts, this implies "no claim for the exclusive use of the word" in inverted commas.

(From the "Trade Marks Journal," December 13, 1899.)

- "VALUE"; for medicines. By Burroughs, Wellcome & Co. Snow-Hill Buildings, E.C. 226,308.
- "HEDONAL"; for a pharmaceutical product. By the Farben-fabriken vorm. F. Bayer & Co., Elberfeld. 226,405.
- Device (the essential particular) of Red Cross nun and wording; for a balsam and an ointment. By Adolf Thierry, 89 Farringdon Street, E.C. 226,583.
- "TORPEDO"; for suppositories and pessaries. By R. Sumner & Co., Lord Street, Liverpool. 226,602.
- "NEW-RUC" (no claim for "New"); for a skin ointment. By T. J. Curwen, 36 Chepstow Street, Walton, Liverpool. 226,781.
- "CALASKO"; for chemicals. By the Patent Borax Company (Limited), Ladywood, Birmingham. 226,791.
- "CYPROL"; for all goods in Class 3. By F. A. Rogers, 327 Oxford Street, W. 226,916.
- "ILLYRIN" for chemicals. By A. König, 22 Schulerstrasse, Vienna. 227,188.
- "DATONE" (no claim for "Date"); for vinegar, sauces, &c., and for mineral and aerated waters. By S. Gulliver & Co. (Limited), 7 Argyll Street, Oxford Circus. 226,731, 226,733.
- "VIDACE"; for mineral and aerated waters. By S. Gulliver & Co. (Limited), Oxford Circus. 223,736.
- "LA FAVONA"; for tobacco. By R. Hovenden & Sons, Berners Street, W. 226,148.

(From the "Trade Marks Journal," December 20, 1899.)

- "CALASKO"; for chemicals. By the Patent Borax Company (Limited), Ladywood, Birmingham. 226,789.
- "EUCASOL" (no claim for "Eu" or "Euca"); for all goods in Classes 2 and 3. By the Ichthyol Gesellschaft Cordes Hermame & Co., 21 Bohnen Strasse, Hamburg. 224,338, 224,339.
- "SULPHUME" (no claim for "Sulph"); for chemicals. By A. Boake, Roberts & Co. (Limited), Stratford. 226,469.

Medical Gleanings.

BRITTLE NAILS.

A WRITER in the *Medical Brief* recommends the use of lemon-juice. Keep half a lemon on the washstand, and every time the person washes let him put each finger into the lemon, and in washing use as little soap as possible. The lemon neutralises the alkali and will restore the nails in a week.

CARBOLIC-ACID ANTIDOTE.

DR. ALVAREZ recommends the use of camphorated oil as an antidote to carbolic-acid poisoning. In a case which came under his notice a quantity of 100 grammes was administered, and within an hour the patient improved, and completely recovered in a short time.—*Ztsch. f. Pharm.*

LANOLINE OINTMENT-BASE.

Starch...	...	...	...	1 part
Glycerin	...	...	...	14 parts
Lanoline	...	...	...	15 parts
White vaseline	...	...	...	4 parts

Dissolve the starch in the glycerin by the aid of heat, and then incorporate the lanoline and vaseline.

—*Monatsh. f. Dermat.*

BROMIDE OF STRONTIUM IN EPILEPSY.

THE chief advantage possessed by bromide of strontium over bromide of potassium in the treatment of epilepsy is that the depression which follows the use of the latter salt is much less marked. This is an important matter, as patients treated with bromide of potassium sometimes assure their medical man that the epileptic fits are almost to be preferred to the depression which follows the use of the potassium salt.

DORMIOL-MIXTURE.

DR. MEITZER prescribes this new hypnotic and sedative (*C. & D.*, August 19, page 334) in a mixture as follows:—

Dormiol	...	...	...	3ss.
Mucilage of acacia	...	...	...	3ss.
Simple syrup	...	...	...	3ss.
Water to	...	...	...	3viij.

To be shaken before use.

Dose: One to two tablespoonfuls.

HYPODERMIC QUININE.

IN the following formulae for hypodermic solutions of quinine advantage is taken of the solvent powers of urethane and phenocoll on quinine:—

I.				
Quinine hydrochloride	...	...	...	3·0
Urethane	...	...	...	1·5
Distilled water	...	...	...	3·0
II.				
Quinine hydrochloride	...	...	...	2·0
Phenocoll hydrochloride	...	...	...	2·0
Distilled water	...	...	...	4·0

The solutions should be used warm.

—*Pharm. Centralhalle.*

DIAGNOSIS OF PHTHISIS.

PROF. GRASSET, of Montpellier, finds that the injection of small doses of tuberculin is an excellent means of detecting tuberculosis in man, providing that no fever is present, and that the lesions are not too advanced. The rise in temperature is only apparent twelve hours after injection, and lasts forty-eight hours. The reaction can only be considered positive where the temperature exceeds a rise of one degree. M. Clinquet, of Cannes, recommends that suspected consumptives take a walk between 3 and 4 o'clock each day, and have their temperature noted immediately afterwards and again on resting an hour. The experiment to be repeated for ten days. Where the difference in the temperature is half a

degree and if the temperature at 4 o'clock was higher on the days the patient took the exercise the probability is that the individual was tuberculous.

NIGHT-TERROR IN CHILDREN.

DR. E. GRAHAM LITTLE, assistant physician to the East London Hospital for Children, communicated a paper to the recent meeting of the British Medical Association on this subject, and from cases which he has examined he concludes that night-terrors are caused by one or other of the following disorders:—

1. By disorders productive of moderate but prolonged dyspnoea (in the majority of cases).
2. A preponderating number of cases are found in rheumatic subjects with early heart-disease.
3. A considerable proportion of cases are due to obstruction of nasal cavities and fauces.
4. Digestive disturbances do not play the important part in causation that is often assigned to them.
5. The evidence for their causal connection with epilepsy or allied neuroses is scanty.
6. The attacks occur in the subconscious stage of early sleep, and are confined to young children under puberty.

Dr. Little further notes that cases are often associated with rickets, adenoids, or enlarged tonsils, errors of refraction, and tapeworms. They are more common in rheumatic children and partake of the nature of dreaming, of somnambulism, and of epilepsy, and are associated with migraine by some writers. They are a central neurosis according to others. Dr. Little had noticed a large proportion of morbus cordis in his cases, and was inclined to place dyspnoea as the ultimate factor.

PHOSPHORIC ACID IN BLOOD.

DR. W. MACKIE, Elgin, communicates to the *Lancet* a method he has used for detecting minute quantities of phosphoric acid in blood, urine, or milk. The process depends on the greenish-yellow tint which even very minute traces of phosphoric acid strike with a solution of ammonium molybdate in hydrochloric acid. If heat is used the colour-reaction is accelerated, but, as heat develops a tint in the molybdate solution, the cold method is preferable. The reagents required are: (1) Ammonium-molybdate solution, made by dissolving 5 grammes of the salt in a few c.c. of strong hydrochloric acid, and making the solution up to 250 c.c. with distilled water; (2) a solution of carbonate of soda and ammonium nitrate. This must be absolutely free from silicic acid (which gives a colour-reaction with ammonium molybdate), and is best made by passing washed carbonic acid through a solution of caustic soda made by the action of sodium on water, and then dissolving 2 grammes of pure ammonium nitrate in each 100 c.c. The solution should be placed in a Schuster's dropping-bulb for use. (3) Pure hydrochloric acid 1 to 1. (4) Standard solution of sodium-ammonium phosphate, made by dissolving 2·944 grammes of the pure salt dissolved in a litre of distilled water. 1 c.c. = 0·001 gramme of phosphoric anhydride P_2O_5 . For use 5 c.c. of this solution are made up to 100 c.c., when 1 c.c. will equal 0·00005 gramme P_2O_5 .

The determination is made by taking 50 c.m. of blood from a finger-prick, and placing it in a platinum capsule; a weighed quantity could be taken if desired. A couple of drops of the sodium-carbonate and ammonium-nitrate solution are then dropped on the blood, and the contents of the capsule slowly evaporated, and, when dry, carefully incinerated. When every trace of organic matter has disappeared the capsule is cooled, and a couple of drops of hydrochloric acid (1 to 1 of water) added, warmed, and the contents carefully washed in a small beaker. 1 c.c. of the molybdate solution is added to this beaker, and a like quantity to another beaker of the same size, and both are made up to the same level with warm water from the wash-bottle. The beakers are then placed on white paper in a good light, and the colour matched in the blank test beaker by adding a few drops at a time the standard sodium-ammonium phosphate solution from a burette. The number of c.c. or fractions of a c.c. required to produce equal tints is the measure of the quantity of phosphoric acid present. The average of a series of determinations made by Dr. Mackie is 8 of phosphoric acid in 10,000 parts of blood. The method is applicable in other cases where minute quantities of phosphoric acid have to be estimated.

British Pharmaceutical Conference.

Research List.

WE gladly print, at the request of the Hon. Secretaries of the Conference, the following list of subjects suggested for investigation. "The Executive Committee hope that members will undertake to work on some of these questions, or others that may occur to them. New subjects have been added to this list to replace those worked out. The committee will be glad to receive questions that may have presented themselves as desirable for investigation." Those who wish further information should address the "Hon. Secretaries, British Pharmaceutical Conference, 17 Bloomsbury Square, London, W.C."

PLANT-ANALYSIS.

1. *Cascara Sagrada*.—What is the nature of the various resins contained in this bark? (See *Year-book of Pharmacy*, 1893, page 131, from *Comptes Rendus*, &c., pages 286-288.)

2. *Cimicifuga Racemosa* (*Actæa racemosa*).—Further information is needed on the chemical nature of the constituent or constituents to which the rhizome of this plant owes its activity. (See *Year-book of Pharmacy*, 1885, page 149.)

3. *Euphorbia Pilulifera*.—Required, a report on the chemistry of this drug.

4. *Astringent Drugs and Preparations*.—The various methods employed for the estimation of tannin in these give very discrepant results. Required, a thorough research into the comparative merits of these processes.

5. *Mezereon-bark*.—What is the chemical nature of the *acid* principle of this bark?

6. *Arnica*.—What is the active principle, and what are the relative proportions of it in the root and flower?

7. *Chamomile*.—Research on the *bitter principle* contained in the flowers of *Anthemis nobilis*. (See *Bulletin de la Société Chimique de Paris* [2], xli, page 483.)

8. *Castor Oil*.—A research having for its object the isolation the purgative principle, either from the oil or the seed.

9. *Taraxacum*.—Little that is definite appears to be known regarding the active principles of taraxacum-root. A research is required to clear up the point. To what constituents are the cholagogue and diuretic properties due?

10. *Fucus Vesiculosus*.—The medicinal virtues have been attributed solely to the presence of iodine and bromine. It is not improbable that it may also contain some organic constituent of importance. A complete chemical investigation is required.

11. *Lobelia Inflata*.—Further investigation of the active principles of this drug is required.

12. *Damiana* is reported to contain a bitter substance, resins, and volatile oil. The liquid extract of the leaves being now extensively used, a thorough systematic examination of this drug is desirable.

13. *Proximate Analyses* of the following drugs are needed:—*Cereus grandiflorus*, *Citrullus Colocynthis*, and *Cassia fistula*.

14. *Papaver Rhæas*.—An examination of the red colouring-matter of the petals is required.

15. *Senna Fruits*.—A comparison of the constituents of the leaves and the fruits would be of interest.

16. *Ash*.—What are the percentages of ash that should be found in the following drugs in powder:—Anise, fennel, cinnamon, cassia, coriander, cubeb (fruit and fruitstalks respectively), gentian, liquorice, guaiacum resin, jalap, myrrh, nuxvomica, black pepper, mustard (black and white respectively), squill, senna (*Cassia angustifolia*, *C. acutifolia*, and *C. obovata*), rhubarb-root (*R. rhaponticum*, *R. palmatum*, and *R. officinale* respectively)?

17. *Salix Nigra*.—In what respect do the constituents of this species vary from those of other willows?

CHEMISTRY.

18. *Glycerin*.—Required, a good method of estimating this substance, applicable, if possible, to pharmaceutical preparations.

19. *Quinine*.—Results obtained in the titration of this alkaloid suggest the possibility that it is di-basic, and not mono-basic. (See *Year-book of Pharmacy*, 1894, page 351; 1898, page 424.) Further work is needed to clear up the point.

MATERIA MEDICA AND PHARMACY.

20. *Standardisation*.—It is suggested that the Pharmacopœia preparations of aconite, stramonium, strophanthus, Calabar bean, and colchicum should be standardised. Processes of assay are required.

21. *Alexandrian and East Indian Sennas*.—The two sennas of the British Pharmacopœia are permitted to be used indifferently. Do preparations of the leaves of the two varieties ofenna differ? If so, to what extent?

22. *Extraction of Drugs by Pressure*.—This mode of extraction (see Dr. Symes's suggestions in the *Year-book of Pharmacy*, 1888, page 356) is likely to produce good results with a number of drugs. Required, a series of experiments in this direction, showing the effect of the process on the quality and yield of extracts as compared with the corresponding products obtained by the ordinary modes of extraction.

23. *Standardised Preparations*.—Report on commercial specimens of official standardised preparations.

24. *Effect of Cultivation, Soil, Climate, and Time of Collection on Medicinal Plants*.—Compare the proportions of active constituents of indigenous plants grown in different districts, and the effect upon these constituents by time of collection.

25. *Capsules*.—The quality and quantity of medicines in capsules. (See *Year-book of Pharmacy*, 1875, page 285.)

27. *Mispronunciation of Latin Pharmacopœia Names is Common*.—It is suggested that a short prosody be compiled for purposes of reference.

28. *Standardised Tinctures*.—Is it possible to standardise any of the pharmacopœial tinctures which owe their activity to the presence of one or more resins?

29. *Compressed Drugs and Coated Pills*.—Required, a report on the strength and quality of the compressed drugs and coated pills of commerce.

30. *Kinos*.—A comparison of the characters of the official and other commercial kinos, including the Cocbin, Malabar, and eucalyptus varieties, is much needed.

31. *Ergot*.—The determination of the proportion of alkaloid extracted from ergot by the official processes for the various preparations.

32. *Syrup of Glucose*.—A series of experiments is required to show whether the official syrup of glucose is a satisfactory pill excipient as regards its composition and official application.

33. *Terebene*.—To what extent do commercial samples of terebene correspond with the characters and tests of the 1898 Pharmacopœia?

34. *Cannabis Indica*.—A preparation which can be relied upon containing the active principle of the drug is still a desideratum.

35. *Liquid Extract of Coca*.—What percentages of cocaine and ecgonine are present in the official liquid extract?

36. *Podophyllum-resin*.—Much of the podophyllin in the market is of foreign manufacture, and does not answer the requirements of the official resin. An examination of commercial specimens would be of value.

37. *Foreglove-leaves*.—These are directed to be gathered from plants of the second year's growth. The radical leaves of the first-year's growth have been stated to be efficacious. A comparison of the constituents of each variety would be of interest.

38. *Plasters*.—What advantages have plasters (such as belladonna, &c.) prepared with a basis containing rubber over those made with a resinous or lead plaster basis only, and would the formulæ of the official plasters be improved by the addition of rubber as one of the ingredients in them?

East Indian News.

A CHARITABLE DISPENSARY FOR MUDHUPUR.—A wealthy attorney of the Calcutta Bar is building a charitable dispensary at Mudhupur, the health-resort a few miles out of Calcutta. The dispensary will be opened in the middle of January.

THE MORPHIA-HABIT IN BURMA.—The spread of the morphia habit in Burma is greatly exercising the Government of that province. It is claimed that the illicit trade in the drug has been stopped, and the reason of the trouble is said to be the presence of morphia in the form of pills as a cure for the opium-habit.

CHEMISTS AND THE EXCISE.—The Excise authorities in Calcutta are bestirring themselves to enforce a regulation, for years a dead-letter, that chemists shall not keep more than 2 quarts S.V.R. on their premises at one time. Cautions have been issued notifying that any breach of this law will result in heavy fines and confiscation.

SALE OF POISONS.—The Chairman, at a recent meeting of the General Committee of the Calcutta Corporation, laid on the table the opinions received from some of the medical members of the Corporation on the Bill to provide for the regulation and the importation, &c., of white arsenic and other poisons, as called for by the Government. He added that the Government had forwarded, for the opinion of the Corporation, the proposed Bill for the sale and importation of poisons and poisonous drugs. It was resolved that a *précis* of the opinions of the Corporation be drawn up and submitted to the Government.

Observations and Reflections.

By KRAYSER.

THE MYSTERIOUS ACTIVITY of the Pharmaceutical Council seems to have culminated in a letter from the President to the President of the Board of Trade. As a calm historical view of the situation this document is satisfactory, but it certainly will not convey to Mr. Ritchie the idea that there is any earnest passion among chemists on the subject of the usurpation of their titles and other rights by incorporated companies. Surely the Lord Chancellor's cool proposal to bestow by statute on anybody who chooses to register at Somerset House designations which the Parliament of 1868 meant should indicate hard work and qualification might have been dealt with a little warmly. It might not have been politic to use exact terms, but some firm protest against Lord Halsbury's oversight in appropriating our property would not have been out of place.

MR. MARTINDALE'S PROPOSED AMENDMENT of the Bill does, unfortunately, as he says, "represent generally the views of the persons entitled to practise pharmacy in Great Britain." It is too obviously an attempt to formulate our various and, I fear, irreconcilable opinions, and the result is unavoidable. The formula becomes so inadequate as to be valueless. I am referring now to the latter clause of the proposal, declaring that "it is not desirable in the public interest that any person not registered under the Pharmacy Acts should be permitted to exercise any control over the retailing, dispensing, or compounding of poisons." This language has evidently been selected so as to meet the wishes of those who say they will not recognise company-pharmacy at all; of those who press for a qualified directorate; of those who will be contented with a qualified manager in each shop; and even of the big companies who will say they provide for all that is demanded already. Mr. Ritchie will have some difficulty in perceiving the distinction between Mr. Martindale's proposal of qualified control and that which the Lord Chancellor has drafted; though of course the vagueness of the former leaves it open for its author to maintain that he means a great deal more than is apparent to the lay mind.

THERE IS NO FIGHTING RING about this manifesto, and perhaps it is unreasonable to expect it in the divided state of trade opinion. If we could have united on a definite policy, and if we carried it vigorously through, we might, with so many circumstances in our favour, have made a formidable attack on the company enemy. On the title question we should be invincible, and respecting this at all events we might with the utmost confidence give the promoters of the Bill notice that we should fight for our legitimate rights at every stage.

MR. BOOT, I notice, considers that his speech to his shareholders was "directly opposed to the qualified directorate idea taken in its entirety." Then all I can say is that he was badly reported. He is alleged to have said: "I really feel that the men who are to be our successors in carrying on this business [the business of Boots (Limited): evidently the directorate was referred to] should be those who have had a training as chemists, and then the further advantage of having been trained in the business experience of a firm like ours." That expressed the qualified directorate idea in its entirety, for Mr. Boot did not appear, from the report of

his speech, to have limited it otherwise than by reserving its fulfilment to his successors.

MR. BOOT'S generous recognition of the possibility of a benefit resulting from having "a proportion of qualified chemists on the directorate" of a chemists' company, coupled with his conviction that some unqualified men are needed on the board to ensure its success, is, if I may use the term respectfully, a bit of bounce. His contention that "there was no example of a large drug company having been successful when the whole of the directorate was composed of qualified chemists alone" is very far from accurate. Indeed, it would be more correct to say that drug companies with qualified directorates have always been successful. Allen & Hanburys, Southall Brothers & Barclay, Hayes, Conyngham & Robinson, Reynolds & Branson, Symes & Co., among others, might be quoted in refutation of Mr. Boot's dictum. They have not developed exactly on his lines, but that does not affect the argument.

PRESCRIBERS OF GALENICAL SPECIALITIES will hardly be brought back to the old ways by the lecture administered to them by Dinneford & Co. and their associates, nor even by the resolution adopted by the Chemists' Assistants' Association "denouncing" their methods. How and what to prescribe may be a fair subject for discussion among medical men themselves, but I quite fail to see sufficient justification for the intervention of dispensers in the debate, unless it be in the way of petition or suggestion. Prescribers, I should expect, will resent the tone in which they are told that their system is "detrimental to the interests of the public and faculty at large," and they may very forcibly reply that it is their business to prescribe whatever they think best for their patients without regard to the profits of chemists, which are not their concern.

NINETEEN HUNDRED.—The Editor suggests—sarcastically, I am afraid—that I should turn my rays on to the coming year, with the object of presenting an outline of its pharmaceutical skeleton. That is a prescription which can surely be dispensed without much difficulty. If I could not raise enough "intelligent anticipation of events which have not yet occurred" to fulfil that requirement I might as well pack up my radiograph and become, say, a Cabinet Minister at once. Take this company-question we have been discussing as an example. The conditions are so abundantly set forth that it is not necessary to be the seventh son of a prophet to forecast the result. We have, first, a Parliament approaching dissolution, and which does not interest itself in the subject anyhow; a Department which only admitted the medical and pharmaceutical clauses to its Bill out of complaisance to the Lord Chancellor, and which would be glad to be relieved of them; a Lord Chancellor whose clauses certainly do not match with his professed intentions; the people chiefly interested represented by a Council so divided in opinion as to be simply unable to offer any tangible guidance. Can there be any reasonable doubt of the result—or, rather, non-result—to be anticipated from what we are pleased to call our efforts under such conditions?

APPEAL TO ARMS.—The attention of English-speaking visitors to the Milan Cathedral is readily attracted by the following notice which appears over an alms-box: "Appeal to Charitables. The Brothers, so-called, of Mercy ask slender arms for the Hospital. They harbour all kinds of diseases, and have no respect to religion."—"Medical Review," *Lincoln, Nebraska*.

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Vol. LV

TWO more volumes have been added to THE CHEMIST AND DRUGGIST this year. As we glance over the rows we observe five nodes of progression. First, the volumes for 1864-68 (five years) are together as thick as those for 1872-74 (three years), 1883-84 (two years), 1886 (one year), and the first half of 1899 (half a year). We also note that a month's numbers of THE CHEMIST AND DRUGGIST are as bulky now as those for a whole year in the 'sixties. Support extended to us by advertisers and subscribers has been contemporaneous with this progress, and we have the satisfaction of now recording the most progressive year in our history. It would be rash to say what THE CHEMIST AND DRUGGIST will be during the coming year. As a journal of pharmacy and the drug-trade it is perforce a record of events, and editorial plans are frequently upset by the seismic movements of the trade. But events cannot alter the heartiness of our wish that 1900 will be to all C. & D. supporters

A Prosperous and Happy New Year.

Pharmacy and the Drug-trade in 1899.

PHARMACY in the United Kingdom has during the year now closing been chiefly remarkable for its unrest. There has been no striking achievement such as characterised 1898 when a new British Pharmacopœia and an amendment of the Pharmacy Act, 1868, were as milestones to mark progress. It is true that the Pharmaceutical Society of Great Britain commenced the year auspiciously. Under Mr. Walter Hill's presidency there was a declaration of policy, the Pharmacy Act of last year being the first item on the programme. This Act was for the purpose of increasing the membership of the Society, which it has done tolerably, and it was promised that the Council would then do something for the trade. But it occurred to Mr. R. A. Robinson, an active member of the Society, that the Council could not move effectively until the Society got on more friendly relations with the Privy Council, which had since 1870 been far from encouraging because in that year the Society refused to sanction

THE POISON REGULATIONS.

When the Pharmacy Act of 1863 was a Bill the Government of the day wished to include in the enactment regulations for the storage and sale of poisons; but representatives of the Society pointed out that these could be better treated by resolution of the Society, and on the promise that this should be done the Government withdrew the clauses from the Bill. Hence the breach which Mr. Robinson attempted to heal by getting the Society on January 11 of this year to adopt as binding regulations the recommendations formulated in 1870. These require chemists and druggists to keep scheduled poisons in a special manner, and to dispense or sell embrocations, liniments, and lotions containing such poisons in bottles distinguishable by touch. The Privy Council ratified the regulations on January 31, and they have been received by the drug-trade with equanimity. This achievement is a striking instance of the influence which the Pharmacy Act has had in educating the drug-trade up to its responsibilities as the custodians of poisons. In 1870 it had not realised the importance of this trust given to it by the nation—indeed, had the Pharmacy Act been as effectively administered as a poisons Act by the Pharmaceutical Council during the first twenty years of its existence as it has been during the past ten years, the trade would have been in a better position to-day.

CARBOLIC ACID

has continued to slay more people than any poison in the schedule, hence public opinion upon the matter, as expressed by coroners' juries, members of Parliament, and the newspaper press, is altogether in favour of putting some restriction upon the sale of the acid. Interrogated by Dr. Farquharson in March, Mr. Jesse Collings, on behalf of the Home Secretary, repeated the old tale about the Privy Council's objection to putting it under the Pharmacy Act schedule. Sir John Leng took up the charge in June, when the Home Secretary said:

The objections to scheduling this poison in England have now been lessened by the fact that regulations for the keeping, dispensing, and selling of poisons within the meaning of the Act of 1868 have now been prescribed, and the Privy Council are prepared to consider whether carbohc acid can advantageously be dealt with in some way, but they cannot take any step except upon a resolution of the Pharmaceutical Society.

At the July meeting of the Council of the Society it was resolved that "carbohc acid in crystals, commercial carbohc acid, and liquids containing more than 3 per cent. of phenols ought to be deemed poisons and added to the second part of

the schedule." This was duly sent to the Privy Council, but remains unratified—a delay on the part of this Government office which almost amounts to criminal neglect.

After the regulations were agreed to, the way was clear for further advance with

THE COUNCIL'S POLICY.

The trade had agreed to the amendment of the Pharmacy Act for domestic reasons, on the understanding that the Council would endeavour to get more important reforms without delay, especially in regard to violation of the principle of the Act by corporate bodies. The Lord Chancellor had introduced a clause into the Pharmacy Bill dealing with this subject inadequately; and although many in the trade agreed with us that this opportunity should have been seized to get the matter settled, the representatives of the Society induced his Lordship to withdraw his clause because it might wreck the Bill. They promised that the company matter, which the Lord Chancellor was eager to remedy, would be dealt with. Accordingly, at the February meeting of the Council suggestions for a draft Bill were adopted. They embodied the following principles:—

1. Interpretation of the expression "person" in the Pharmacy Acts so as to make it include "a partnership, or an association of persons or a body corporate."
2. Restriction of sale and dispensing of medicines to chemists and druggists and pharmaceutical chemists.
3. Limitation of the period during which the business of a deceased chemist and druggist or pharmaceutical chemist might be carried on under trust. Twelve months was the period fixed.

The Council did not originate these ideas, but built them up from recommendations by its constituents; as a council, however, the members were unanimous in adopting the suggestions as suitable to present to the Lord Chancellor. The trade did not consider the Council to be serious. The occasion was fitting for such a suggestion as No. 1, but No. 3 would imperil the safety of the Bill and No. 2 would wreck it. That was our view, the general view, and the Lord Chancellor's did not go as far as No. 1. About six weeks after he received the suggestions his Lordship startled pharmacy and medicine by introducing two Bills, one dealing with company-pharmacy, the other prohibiting any company from practising as a physician, surgeon, dentist or midwife. The next step was the embodiment of the Bills as clauses in the Companies Bill (*C. & D.*, June 6). The pharmacy provisions were slightly altered in the transfer as the following contrast shows:—

Pharmacy Bill.

A company may carry on the business and use the description of a pharmaceutical chemist or chemist and druggist if and so long only as the business is *bond fide* conducted by a manager or assistant being a duly registered pharmaceutical chemist or chemist and druggist, as the case may require, but, subject to this provision, anything which would be an offence under section 15 of the Pharmacy Act, 1868, if committed by an individual, shall be an offence if committed by a company.

Companies Bill.

No company may carry on the business and use the description of a pharmaceutical chemist or chemist and druggist unless such business is *bond fide* conducted by a manager or assistant being a duly registered pharmaceutical chemist or chemist and druggist, as the case may require, and unless the name of the person so qualified is conspicuously posted in the shop or other place in which the business is carried on, but, subject to this provision, anything which would be an offence under section 15 of the Pharmacy Act, 1868, if committed by an individual, shall be an offence if committed by a company.

Chemists and druggists were unanimous in the opinion that neither of these proposals would do, and the Irish

Pharmaceutical Council became a silent but powerful opponent of the Companies Bill proposal, which would equally affect Irish interests. Mr. Downes, the President of the Society, had condemned the "suggestions" as impossible of attainment and urged the British Council to confine itself to the company question and join hands with the Irish in securing recognition of titles and companies of qualified persons only. No heed was given to the Irish request. Meanwhile we had addressed members of the House of Lords calling attention to the injustice of the Lord Chancellor's proposal, and urging that if pharmacy companies were to be recognised at all they should be compelled to appoint a directorate of qualified persons. The Irish Council also appears to have addressed the Lord Chancellor, so that when the third reading of the Companies Bill was taken on August 3 his Lordship addressed himself solely to this question of company pharmacy and medicine, especially emphasising (1) the desirability of companies not doing what the individual may not do without examinations as to qualification, (2) not interfering with vested interests, and (3) not allowing the public to be exposed to the dangers of unqualified dispensers. The history from then to date may be briefly told. The British Pharmaceutical Council, stung by sharp criticism from some of its members, in October resolved to draft a clause for the Companies Bill, and in November brought up a proposal in the following terms:—

No company shall carry on the business of a chemist and druggist, or assume or use the title "pharmaceutical chemist," or "pharmacist," or "pharmacist," or "chemist and druggist," or "chemist," or "druggist," or "dispensing chemist or druggist," or other title implying registration under the Pharmacy Acts. And if any company contravenes this enactment it shall be liable to the same penalties as those incurred in the case of individuals under the Pharmacy Acts.

This was a majority report, yet Mr. Glyn-Jones (who, by the way, had been elected to the Council in May), seconded by Mr. Walter Hills, moved what amounted to its rejection and succeeded, by ten votes to eight, in sending the matter back to the committee for further consideration. This move was effectual in bringing out the long-concealed opinions of the various members regarding company-pharmacy, while incidentally it transpired that the members had not been all of one opinion regarding the suggested draft Bill; in fact, they completely justified the assertion that the Council was not serious in that matter. The recomittal of the report gave the Federation of Chemists' Associations a chance of action which was energetically taken by Mr. John Smith, of Liverpool (the President), and Mr. J. Cocks, of Plymouth (the Secretary), and they obtained the opinions of chemists in nearly eighty districts in the country, the majority declaring for (1) the protection of titles and (2) companies of qualified individuals only. There the matter rests at present, but Mr. Martindale, President of the Pharmaceutical Society, has asked the President of the Board of Trade for a conference on the subject, and Mr. Ritchie has promised that he will consult the Society if need be. Pharmacy companies have scarcely given an inkling of what they will do in the matter, but if recent utterances by Mr. Jesse Boot, Chairman of their Association, be taken as an indication, we must reckon with uncompromising opposition from that quarter. We have not in the foregoing dealt with all the proposals which have been put forward for remedying the company evil, but may mention one for which there is considerable support—viz., that each shop belonging to a company should have a qualified manager, and publish his name on the shop and on trade documents. This is substantially the Edinburgh proposal, and in all but the publication of the name is already provided by the Pharmacy

Act in respect to shops kept open for the sale of poisons. No subject of the year approaches this one in interest except it be the co-related one of

DISPENSING IN DOCTORS' SURGERIES.

The Lord Chancellor has expressed his opinion on the public danger of unqualified dispensers, but that has not, unfortunately, been considered as regards doctors' surgeries. We have had proof of the real danger which this is. Early in January a fatality occurred at Heaton Norris through a doctor's dispenser putting 50 gr. of morphia in a mixture instead of $1\frac{1}{2}$ dr. of the solution of morphia, and the reports of the inquest which followed awakened interest throughout the country which penetrated to the House of Commons. Mr. Glyn-Jones, once more gauging the pulse of the trade, was prompt in calling the attention of the authorities to the matter with a view to reform. He maintained (1) that there is much dispensing of poisons in doctors' surgeries which is a direct violation of the Pharmacy Act; (2) that the requirement of the Apothecaries Act, that dispensing for apothecaries should be done by themselves or by certificated assistants, is not enforced by the Society; and (3) that it is inimical to the public safety, and contrary to medical etiquette, that medical practitioners should employ unqualified assistants for these duties. Mr. Glyn-Jones appealed to the Pharmaceutical Council to look into the matter, but could get no satisfaction in that quarter, and accordingly at the May meeting he moved that the Council should be instructed on lines which he suggested, but through a technicality his motion was passed in an amended and non-committal form. Meanwhile, the matter had been brought before Parliament and under the notice of the Privy Council, which, in turn, submitted it to the General Medical Council, whose executive committee in June rather pooh-poohed the whole affair; but the G.M.C. referred it to a special committee, and that committee reported at the meeting this month. The report was dealt with in our issues for December 3 and 10. It was of the *tu quoque* character, and in effect said "chemists employ unqualified dispensers—why should not doctors?" To that we reply that the chemists' mistakes are controlled by the doctor, but the doctor's by himself, and therein is the public danger. We expect to hear more of the matter.

THE CONDITION OF PHARMACY,

as reflected by the agitation for greater restriction in its practice, would seem to be precarious, and undoubtedly available statistics as to the number of individuals in the occupation indicate growing competition. Thus in Ireland, where at the end of 1898 there were 1,311 registered sellers of poisons, there are now 1,347, besides thirty registered pharmaceutical assistants. Pharmaceutical chemists number 593, and the lower grades 754. If the Preliminary examination figures may be taken as an index to entrance into pharmacy, there has been a check in Ireland this year, as only 47 have been added compared with 71 in 1898, while there were also fewer licensed—viz., 22 as compared with 27; and registered druggists increased by 17—a diminution of 1. In Great Britain we have larger figures to deal with, and they are all on the up grade. The following is a summary of the examination-results:—

First	...	...	examined 1,530	...	passed 723
Minor	...	...	" 1,817	...	" 552
Modified	...	...	" 1	...	" 1
Major	...	...	" 103	...	" 50

In 1898, of 1,349 examined 712 passed the First, and of 1,679 Minors 535 passed. Thus the numbers entering the trade are on the increase, and comparison with past years

brings this out more strongly. We take the figures for the four decades since the Pharmacy Act came into force:—

	Passed Prelim.	Passed Modified and Minor	Nos. on register
1869	—	...	919 ... 12,500
1879	783	...	282 ... 13,551
1889	721	...	313 ... 14,080
1899	887	...	553 ... 15,473

The high passes in 1869 were chiefly due to assistants entering for the Modified examination, and the percentage of failures in those days was trifling—about nine out of ten candidates passing. To the Preliminary passes we have added those who have passed other examinations accepted for it, who numbered 62 in 1889 and 164 this year. The numbers on the register at the end of 1869 and 1899 are approximate; that for this year is, in fact, for the beginning, but the removals by death and erasure are likely to equal the additions by qualification. The notable facts to be deduced from these figures are (1) the increasing numbers entering the business, especially during the past decade; (2) the increase in the proportion of those who after passing the Preliminary examination go forward to the Minor and are registered—viz., 1 in 2.7 in 1879, 1 in 2.3 in 1889, and 1 in 1.4 in 1899. This abnormal increase in the proportion during the past decade is directly due to the enforcement of the Pharmacy Act provision that the actual seller of poisons (assistant or employer) must be qualified. It may also be observed that the registers increased by 100 annually between 1869 and 1879, by 53 in the ten years following, and by 139 yearly between 1889 and now. Were it not for the enormously increased stringency of the Minor examination the natural increase to-day would be at the rate of 200 a year. This brings within the scope of our review certain proposals which have been made regarding

THE MINOR EXAMINATION.

The enormous and unprecedented number of candidates (1,817) examined this year is the result of a slight change in the schedule which came into force after the July examination, for five-sixths were examined in the first three examinations. The failures have again been high—viz., 1,265, or 69 per cent. on the year—but the rush of candidates did not affect the failures appreciably; indeed, the ratio decreased to 67 per cent. in April, when the failures in Edinburgh were only 59 per cent. It is now generally admitted that this examination is much too heavy for one occasion, and our repeated suggestion that it should be divided has received support during the year from several provincial associations, and from Professor Leech, of Manchester, who advocated it in his address to the School of Pharmacy in October. It is understood that the Boards of Examiners favour the division, and as it may be possible to effect it without fresh parliamentary powers, the approaching revision of the Pharmaceutical Society's by-laws may be a fitting opportunity for adopting the proposal. The simplest procedure would be to refer students back in their weak subjects, as is the case in medical examinations.

PHARMACY ACTS.

The Council of the Pharmaceutical Society (G.B.) has had but one novel infringement of the Pharmacy Act, 1868, to carry to the courts during the year. Indeed, the cases which have been made public are remarkable for their obvious weakness of defence, and it looks as if the Council could afford to dispense with the expensive formalities which attend most provincial cases. The Society's accounts show that law-costs came to over 700l. in 1898, this being the balance out of pocket after defendants had paid fines and

costs. We feel that this sum might, by judicious inquiry and employment of smart local solicitors, be considerably decreased. The novel case to which we have referred is that of the sale of a preparation of nicotine (a greenhouse insecticide) by a Southwark seedsman. This has been going on for years, but in November the Society convinced the Lord Mayor of London that nicotine is a poisonous vegetable alkaloid, and he inflicted the statutory fine for the sale of a liquid containing fully 30 per cent. of the alkaloid. It was proposed to carry the case to the High Court, but that intention, we are informed, has been abandoned. It is understood that the Society's officers find it difficult to get at the names of unqualified assistants who sell poisons, and this was shown in several cases this year where the wrong persons had been summoned. The most important actions under the Irish Pharmacy Acts have been the case of an apothecary's apprentice, who obtained from the Irish Queen's Bench Division a mandamus to compel the Society to admit him to the Licence examination which it had refused on the plea that his apprentice master was not an apothecary under the Apothecaries' Hall Act, 1791, and a case, which was undertaken by the police, who in November proceeded against a registered druggist because he did not keep a qualified assistant in a branch shop. The defendant was fined. This was the first case of the kind under the Amendment Act. The Irish Society has obtained greater assistance from the police authorities during the past year in the administration of the Acts, and the frequent protests against reductions of fines appear to have been taken to heart by Dublin Castle.

Outside these islands the regulation of pharmacy in other parts of the Empire has been the subject of legislation in British Guiana, Cape Colony, Gibraltar, Seychelles, and the Isle of Man (the last-named still being in the throes of birth). The British Guiana Ordinance is of the usual colonial character, and practically confines pharmacy to qualified and registered persons, providing a list of simples which may be sold by others under specific conditions. The Cape Colony Act has been rigorously amended, especially in respect to the sale of poisonous proprietary medicines, which, it has been enacted, must bear the name of the poisonous ingredient as well as the word "Poison." A similar proposal has been before the Victorian Parliament on the amendment of the poison laws of that colony, and is still under consideration. The Cape Act, we should add, has not been ratified by Sir Alfred Milner, and is not likely to be until the war is over. The Rhodesia Legislature passed a Medical and Pharmacy Ordinance which contains certain objectionable features that called forth strong opposition after it passed, and the ordinance still awaits ratification. The Gibraltar Ordinances secure the registration and proper qualification of druggists, British and Irish qualifications being fully recognised.

NEW LAWS.

Parliament was too busy with national and Imperial matters to pay much attention to trades, but several measures were enacted which have had influence upon pharmacy. The Local Government (Ireland) Act, which came into force this year, contains provisions directly affecting dispensaries and the supply of medicines to State-aided institutions. The method of contracting has been improved, and it is now considered improper for a firm to hold contracts for the supply of medicines and of surgical instruments. The criticism of the drug-supply which we initiated three years ago has borne fruit in greater powers conferred by the Act on the Medical Department of the Local Government Board, which now requires a uniform system of tendering at prices periodically fixed officially, and tenderers state

what discount they offer off these prices. This does away with the abuse which was the subject of our criticism. The local authorities are also required to appoint analysts to whom samples of medicines supplied are periodically submitted for analysis. The Local Government Board has been busy during the year nullifying and ratifying such appointments. It refused to recognise pharmaceutical chemists or any analysts who are not Fellows of the Institute of Chemistry, and this regulation was protested against by the Pharmaceutical Council (Ireland), but the L.G.B. proved immovable; however, one good result may come out of the controversy—viz., that the Pharmaceutical Society may institute a post-graduate qualification in pharmaceutical analysis to meet the requirements of the L.G.B. The Institute of Chemistry has also obtained the consent of the English Local Government Board to the recognition of the F.I.C. as the qualification for public analysts in England and Wales. This was given in March, when the Institute endeavoured to get the recognition made statutory. At that time the Bills to amend the Sale of Food and Drugs Act were coming along, and in the course of the Session Mr. Kearley's was dropped, and the Government measure finally became law. It makes the pre-existing law more effective by instituting proper control over imported dairy-produce, extending the definition "food" to condiments and other articles used as food-adjuncts (such as baking-powder) which previously had been ruled outside the Act; it simplifies the procedure as to evidence of analysis, gives power to the Local Government Board to take samples in districts where the local authorities are neglectful, makes the invoice a more effective warranty, and enables magistrates to inflict the punishment of imprisonment upon persistent adulterators. The Act comes into force on Monday, January 1, 1900. In the passage of the Bill through Parliament the Government succeeded in preventing a court of reference being instituted, and defeated a proposal to make the use of food-preservatives illegal by appointing a Departmental Committee to inquire into the whole subject, and that Committee has recently taken evidence. Saving the Shop-seats Act, there was no other measure enacted which directly affects the drug-trade.

LEGAL PROCEEDINGS.

Of all the legal procedure of the year none has been so important as that taken under the Sale of Food and Drugs Act, and it is particularly noticeable that the British Pharmacopœia is responsible for the bulk of it, the majority of the cases interesting us being in respect to camphorated oil, milk of sulphur, and sweet spirit of nitre. The 1898 B.P. introduced each of these names as a synonym. Public authorities had thus the opportunity of proving (1) that if not an actual the B.P. is a potential legal standard, and (2) that B.P. synonyms are as operative as the chief names. It is some years since Dr. Attfield, in his capacity as Editor of the B.P., advised the General Medical Council that the quality of popular medicines sold by retail might be controlled by giving the popular names as synonyms of the B.P. representatives of the medicines, so that the experience of this year has completely borne out Dr. Attfield's anticipation. In no case has a magistrate refused to consider that the B.P. is applicable to retail sales in these cases, nor has this happened in instances where it has been argued that the B.P. standards and commercial standards differ, as was argued in cases where eucalyptus and juniper oils were at fault. Registered chemists have been concerned in a fraction only of such cases, most of the sellers of deficient B.P. preparations being small shopkeepers, who obtain their supplies from certain wholesalers who lay themselves out for this

kind of trade, and enforcement of the B.P. has demonstrated that] some wholesalers consider themselves justified in making the quality and materials of a preparation what they choose if it happen not to be B.P. The difficulty of getting such culprits punished has also been met by taking advantage of the Merchandise-marks Act, which has been rigorously enforced during the year against manufacturers and wholesalers who had supplied articles of deficient quality. Under the same Act aerated-water manufacturers have been prosecuted in the three kingdoms for using other makers' bottles, and although in Scotland several cases have been carried to the higher courts the judges have maintained the convictions.

Few of the hundreds of legal cases which have occupied the attention of judges during the year have involved any new principle, and, as generally happens, the longest and most expensive lawsuits have been in respect to patent and trade-mark rights. Thus the owners of Rhoden's electrolytic alkali process have obtained a decision of the Court of Appeal in their favour, the contention of the Castner-Kellner patentees being that their method (a rocking-tray containing mercury as an electrode) was infringed by Rhoden's, in which the electrolytic cell containing mercury is stationary, and the carbon anodes revolve. The owners of the Masc-Baur patent obtained in February, on the other hand, protection for their process against defendants who used different materials, and the resulting product differed somewhat in composition, but the gist of the judgment was that the product had been reached in Dr. Banr's way. The Saccharin Corporation have this month obtained a decision in their favour on the basis of one of Monnet's patents, under which, by simple adaptation of temperature and the quantity of sulphuric acid employed, more than double the productive yield of toluene sulphochloride is produced than by the previously known reaction, the cost of the saccharin being thereby reduced.

Early in January the Valentine Meat-juice Company sought to restrain by injunction the Valentine Extract Company (Limited) from using the name "Valentine" in connection with meat-extracts, and evidence at great length was heard during the summer, as a result of which Mr. Justice Stirling gave a long-delayed judgment in November, holding that the sale of the capsules made by the latter company could not be considered an infringement of the rights of the former, whose product is a meat-juice chiefly used by invalids. During the year several cases have been heard in which chemists have been mulcted in respect to the supply of medicines from which damage has been alleged to have resulted, notably a case heard in the High Court in which citrin-ointment was supplied for ringworm on a child's face, and it was so rubbed in as to cause a sore. The chemist had to pay 5*l.*, although it was contended that the ointment was not used as directed. There is a case in Yorkshire (still *sub judice*) in which a chemist was alleged to have given 8 gr. of atropine sulphate, instead of as much antifebrin, for headache. The person who took it did not die, but he obtained compensation from the county court judge, which has since been appealed against. Such cases as these have given Mr. Glyn-Jones a strong force for a start to his

P.A.T.A. DEFENCE-FUND.

This new development of the Proprietary Articles Trade Association was needed to give additional interest to that anti-cutting scheme, which, although not retrogressing, shows signs of having reached a limit so far as retailers' interests are concerned. The Association succeeds in its object of protecting the prices of those articles which it has

got on the list, but it has not secured many more important articles, such as chlorodyne, and there are many retailers who fail to recognise that even a partial list is a gain. The scope of the Association has been widened by the establishment of the defence-annexe, which will secure for the members who subscribe to this part (it is co-operative in conception) defence in the court of first instance, as well as legal advice, in respect to prosecutions under the Act bearing upon the drug-trade.

We may also mention as a legal interpretation of the year the decision of the London County Council to regard the bottling of benzine on unlicensed premises as an infringement of the Petroleum Act; but the Council has not taken too narrow a view of the matter, and has permitted one bottle to be kept "open" at a time for bottling or retailing in small quantities. Turning now to

PRACTICAL PHARMACY,

we must deal lightly with the work of the year, for much of it is summarised in the index which accompanies this number. There has been a good deal of Pharmacopœia criticism, especially on the assay-processes, but on the whole it has been temperate and constructive rather than destructive. The Editor of the B.P. was not inclined to agree with the latter statement when, at the meeting of the British Pharmaceutical Conference held at Plymouth in July, several authors rather severely condemned some of the B.P. processes, and there was much disappointment there because a debate on the B.P. as a legal standard was aborted. In the course of the discussion the method of revising the Pharmacopœia was freely criticised. It appeared from what the Editor then said that the basis of the revision is a series of four scrap-books in which "errata," "researches," "criticisms," and "general notes" are classified, and this revelation inflamed some critics to violent protest. It seems that the appointment of pharmacists to represent England, Scotland, and Ireland on the Pharmacopœia Committee has not fulfilled the aspirations of pharmacists. From the little that has leaked out, the committee has had under consideration during the year some questions of principle, but it is yet too soon to pronounce upon the success or otherwise of the advance in co-operation between the General Medical Council and pharmacists. At any rate the feeling of the drug-trade, retail and wholesale, is that, now that the Pharmacopœia is virtually accepted by the courts as the standard for the sale of drugs, it is imperative that those who are concerned with that branch should have a greater voice in determining what the standards should be. The draft of the Colonial and Indian Addendum of the B.P., which made its appearance at the end of 1898, has been the subject of much comment in the *C. & D.* Among those who contributed notes this year were Mr. J. G. Prebble, Mr. W. Mair, and Mr. A. E. Bertie-Smith. In November Dr. Atfield laid a report of progress before the General Medical Council, from which it appears that copies were sent to seventy areas of British administration, and that up to November fifty-three had communicated their views. Professor Morrison, representing a committee sitting at Montreal, sent a selection of formulæ, which have been reprinted in the *C. & D.* Australasian criticism has appeared mainly in the *Chemist and Druggist of Australasia*, the opinions of such experts as Mr. H. G. Smith, Mr. R. T. Baker, Mr. G. Watkins, Mr. E. C. Blake, Mr. Marden, and Mr. Bancroft being expressed. South African physicians and pharmacists have also had something to say about it, as well as Indian medical authorities.

Apart from Pharmacopœia criticism, the work done in pharmaceutical research during this year has not been

above the average, but there is no sign of decadence, and we have published a considerable number of original communications contributed by all departments of pharmacy. Although research in

THE DOMAIN OF PURE CHEMISTRY

has been no less active than usual, there is little of a sensational character to record. In general chemistry, one of the most important matters to record is the fact that the committee of the German Chemical Society appointed to revise the values of the atomic weights of the elements has issued its report, and the table published may be regarded as the last authoritative word on the subject for some years to come. It is worth noting that the values chosen by the British Pharmacopœia are in very close accord with those selected by the German authorities. Low-temperature chemistry has received much attention, and Professor Dewar has succeeded in solidifying hydrogen, thereby getting within a few degrees of the absolute zero of temperature.

Much work has been brought to a successful issue in the important group of bodies which includes terpenes and essential oils. Amongst these, perhaps, the most interesting is the controversy raised by the announcement of Stiehl that he had detected in lemongrass oil no fewer than three isomeric aldehydes—viz., citrodoraldehyde, allemonal, and citral, of the formula $C_{10}H_{16}O$, and that the last-named is present in very small quantity, but appears after treatment of the oil with sodium bisulphite containing free acid. This called for an immediate revision of past work on this important body, but the three great authorities, Döbner, Semmler, and Tiemann (the last of whom has passed away quite recently), after lengthy re-investigation, uphold their former work, and are agreed that Stiehl is in error. Tiemann, however, stated with much strong evidence that two stereo-isomeric forms of citral do exist in the oil. The chemistry of essential oil of jasmine has received great attention from Verley and Hesse and Müller. The former states that its active constituent is phenyl-glycol-methylene acetal, whereas the latter, who have apparently upheld the assertions successfully, deny the existence of this body in the oil. They have almost completely elucidated the composition of the oil, and its artificial production is now an easy matter. The discovery of nitrogenous bodies in essential oils with exquisite odours is remarkable, no fewer than three having been announced this year. These are methyl-anthranilate, $C_8H_7(NH_2)CO_2CH_3$, which Hesse found in jasmine oil, and Erdmann in neroli oil; indole, C_8H_7N , also found by Hesse in jasmine oil; and a pyrrol derivative found in the oil from unripe oranges. Jasnone, $C_{11}H_{16}O$, and tuberone, $C_{15}H_{24}O$, are two new ketones which have been discovered in the oils from which they are named, and the sesquiterpene humulene, hitherto only known in oil of hops, has been found by Fichter and Katz in the oil from poplar-buds. Gädner has investigated a number of the cress oils and has identified the main constituents of them as benzyl- and phenyl-ethyl-isothiocyanates, identical in every respect with the natural compounds.

Turning to the alkaloids and allied bodies, Ahren's discovery of staphisagrine, a new alkaloid from the seeds of *Delphinium Staphisagria*, is to be noted. He assigned to it the formula $C_{20}H_{21}NO$, but has just changed his views and now gives it as $C_{10}H_{10}N_2O$. Moristima has isolated a well-defined crystalline alkaloid from *Lycoris radiata*, which he names lycorine, $C_{34}H_{52}N_2O_8$. Dunstan and Henry have shown that the Indian plant *Hyoscyamus muticus* contains appreciable quantities of hyoscyamine, while Dunstan and Read have continued the research on aconite alkaloids commenced at Bloomsbury Square, and have proved that Wright and

Lnff's conclusion in regard to japaconitine being different from nap aconitine was correct. Knorr, of autipyrin fame, has continued his classical researches on morphine intended to deduce its constitution, and has given a formula which bears a very striking resemblance to that proposed by Goldschmidt for papaverine. Willstätter, continuing his work on the ecgonine series, has almost proved the constitution of this body, which should materially assist the problems of alkaloidal synthesis. Klostermau, in examining the alkaloids of *Anagyris foetida*, has prepared anagryne in an absolutely pure state and shown that it is the butyl derivative of the alkaloid of laburum, cytisine, and has, therefore, the formula $C_{15}H_{22}N_2O$. Gadamer claims to have proved that atrosine (Hesse) and *i*-scopolamine (Schmidt) are the same alkaloid, but that the former is the labile form containing two molecules of water, whereas the latter is the stable form containing one molecule.

Several chemists have carried a step further our previous knowledge of the preparation of artificial glucosides, and ere long we may hope to see many of these natural bodies synthesised. Fischer and Tollens are amongst them, the latter having prepared an artificial glucoside by the condensation under suitable conditions of glucose and formic aldehyde. Ryan, by condensing a number of phenols—including naphthol, orthocresol, carvacrol, &c.—in alkaline solution with aceto-chlor-glucose, has prepared typical glucosides, which may lead us to expect the synthesis of the more complicated natural ones before long. An important piece of work was published last month in regard to the asymmetric nitrogen atom. It has long been believed that the atom as it exists in compounds of the type NABODE carries optical activity, but the only proof that optically active tetra-alkyl ammonium salts were capable of existence was the unsatisfactory one of Le Bel, who cultivated *Penicillium glaucum* in a solution of isobutyl-propyl-ethyl-methyl-ammonium chloride. A very faint rotary power appeared, but was so transitory that it rapidly disappeared. As now appears probable, this was due to the hydrolysis of the salt, with the formation of a tertiary base. Pope and Peachey have just announced the resolution of benzyl-phenyl-allyl-methyl ammonium iodide into two optically-active isomers, having avoided the use of any solvent which could produce the effect above referred to. We may now expect the asymmetric nitrogen to come to the fore and take its natural place alongside the corresponding carbon atom. This gives the opportunity of referring to the great activity of chemical research in this country. For nearly a generation we have been accustomed to hear how much behind our continental brethren we are in this matter, but that can no longer be said, for the work now communicated to the Chemical and Royal Societies in all departments of chemical research is not excelled by any recorded elsewhere.

ASSOCIATION WORK.

We have already indicated that chemists' associations have had plenty to say throughout the year, and 1899 ends with more of them than there were when the year began. The oldest association in England—that of Liverpool—celebrated its jubilee in January, when an address by Mr. Edward Evans, sen. (the President), was read by his son. This Association maintains the high position which it has held as a vehicle for the publication of pharmaceutical research, in this respect now beating the Pharmaceutical Society, and only being rivalled by the North British Branch of the latter. Association work generally in this respect is retrogressing, because it has been found that retail pharmacists are more attracted by subjects of trade interest, and those who do work along practical lines seem to get more

sympathetic audiences in assistants' associations. Even assistants show a tendency to political strife. The Chemists' Assistants' Union, which was formed in 1898, is still alive, although its resources must have been somewhat taxed by its decision to run a candidate for the Pharmaceutical Council election (Mr. R. E. Wright), who polled 580 votes. The Public Dispensers' Association has been affiliated with the Poor-law Dispensers' Association—a common-sense arrangement. The latter Association, after a persistent struggle with the Local Government Board, has obtained an increase of 40% in the maximum salaries to Metropolitan Poor-law dispensers.

SIDE-LINES

continue to form a prominent part of the chemist's business, and we have printed a number of articles this year bearing upon them. One of the chief accessories of this character is the trade in optical goods, which is growing steadily in favour with chemists. The Spectacle-makers' Company has held three examinations for its diploma this year, and forty-one chemists have passed, making a total of fifty-three chemists who have taken up the Fellowship of the Company by examination. As evidence of further activity in optical matters, it may be mentioned that a new Optical Society was founded in London on June 5, with Mr. W. H. E. Thornthwaite as President. In photography the chief features of the year have been the introduction of adurol, hydramine, and kachin developers, and the placing on the market of a new class of stripping-film in which the gelatin film can be taken off its paper support. The "Secco" and the "Wellington" films are representative of the latter class of films. The photographic side-line continues to be popular with chemists. The progress of radiography during the year is represented by improvements in the apparatus used. The Wehnelt electrolytic break was introduced in March, and has contributed materially to the production of a steadier illumination of the tube and shortened exposures. To a limited extent x rays have been used for the treatment of lupus and eczema. Mr. Mackenzie Davidson has devoted much time to the perfection of improved localising-devices, and as the year closes promises to make an important stereoscopic cryptoscope available for use in surgical practice.

TINCTURE-DRAWBACK.

In January the Drug Committee of the Chemical Section of the London Chamber of Commerce, after consultation with the Drug Club, began to reconsider the regulations in regard to drawback on alcoholic medicinal preparations, with the view to securing some simplification of methods. Since the drawback was authorised by the Excise the export trade in tinctures and the like has increased enormously, the annual export amounting to not far short of 100,000 proof gals. per year, thus representing business of 60,000% to 70,000% in value which was previously done through Hamburg. In January a deputation representing the Chamber of Commerce and the Drug Club discussed the imperfections of the regulations with Dr. Thorpe, Mr. F. L. Lambert, and Mr. Helm, of the Inland Revenue Department, and the result was so satisfactory that, after the Budget-proposals had been disposed of, the Department issued in July a new General Order abolishing the lists of drawbacks which had grown since 1888. The new Order instituted a uniform allowance of 3 per cent. for waste, *plus* the drawback of 10s. 10d. per proof gal, upon all preparations except a few preparations made by mixing, and also simplified the rules to be observed by exporters. The whole matter is completely summarised in *THE CHEMISTS' AND DRUGGISTS' DIARY* for 1900, page 220. While these negotiations were proceeding it transpired that the Inland Revenue authorities

are not indisposed to permit free use of dutiable alcohol for industrial purposes, provided manufacturers give sufficient guarantee and permit efficient Excise inspection; but these considerations weigh so heavily upon manufacturers as to be prohibitive. Perhaps in time a man will arise to devise a simple method by which the Revenue will be protected, and manufacturers will have the freedom of action which they require.

In the annals of

BRITISH COMMERCE

the year 1899 will stand out as one of the most remarkable. Month by month the Board of Trade has recorded increases in our exports and imports, and in spite of growing industrial competition between nations the United Kingdom holds her own in general trade, and develops her business with extra-European parts of the Empire. Canada especially has stood out prominently as a growing customer, thanks to the working of the preferential tariff, and the coming federation of our Australasian Colonies gives hope of improved business in that region. The year has also been characterised by a great imperialistic awakening, which some put down to the sentiment of the music-halls, the poetry of our Kiplings, and the speeches of our Chamberlains—with none of which are we particularly concerned—but the most thoughtful students of events, the best observers, and the most experienced commercial men recognise in the wave of imperialistic enthusiasm the first signs of that federation of our race which will make the scattered fractions a magnificent unit of commercialism and progress. The year has also seen the threatened dismemberment of China collapse into an agreement between Britain, Germany, and the United States to maintain in that most ancient of countries an open door for trade, and thereby a commercial revolution has been averted. The Board of Trade has lately started an Intelligence Department, which is intended to provide information regarding foreign tariffs and particulars about trade in various manufactures, and information as to the shipments, weights, measures, money, and the chief merchants in particular industries. In January the United States revised the Cuban tariff, reducing the duty on drugs and chemicals by about 58 per cent., quinine being put on the free list. The new Japanese tariff came into operation a year ago, and her imports have rapidly decreased owing to its protective nature. Other minor tariff-changes have occurred in Brazil, Venezuela, Porto Rico, and Victoria, while a new tariff was introduced in Jamaica in August to meet the stringent financial conditions prevailing there. Unhappily we are now at war with a people who are a part of that race which preceded ourselves in colonising the world, and the effects of this lamentable disaster upon British trade cannot yet be reckoned, although the feeling of the nation is that we are fighting for a far larger stake than the isolated interests of South Africa. Like all wars the first stimulus of the South African Campaign has been felt in the chemical industry, and partly also in the drug trade, both of which have shown excellent business this year. The trade in

CRUDE DRUGS

has tended during the year to shift a trifle from ancient landmarks. Public auctions were founded at a time when the Press was slow, and buyers had immovable faith in their agents. With changes in the conditions there have come changes in the feelings of those who frequent the Mincing Lane auctions, and although these still are, and can never be else than a convenience to everybody for advertising wares and fixing standards of quality and price, there has during this year been a determined effort on the part of wholesale buyers to limit the number of the sales to monthly

periods. There was a similar and fruitless agitation a dozen years ago, but the recent one has had a substantial result, it having been mutually agreed to begin 1900 with alternate long and short sales. The fluctuations in the values of drugs have not been exceptionally numerous this year, but a few of the richer staples have been greatly enhanced in value. We may take them in alphabetical order, and first we come to Caps aloes, one of the few articles affected by the war. Naturally this drug has improved in position, and at several of the drug-auctions none could be offered. Fine bright hard aloes which sold at 25s. in January sales is now worth 29s. 6d., not at all a famine price, but had not an arrival of 150 cases come to hand about a month ago we should have been fairly on the way to 2l. per cwt., a not-unlikely price in the near future. Socotrine aloes is about 2s. 6d. to 5s. easier on the year, and Curaçao in gourds has got so low that importers cannot handle it at a profit. The imports of asafetida have been on a larger scale than hitherto, but much of the drug has been of so low quality as to be unsuitable for export to the United States, our largest customer. Prices have accordingly ruled low, except for the finest qualities, which the B.P. now demands. Buchu leaves have fluctuated considerably during the year, as from 6d. per lb. for round leaf in January they dropped to 4½d. in July, and since have advanced to 1s. 0½d. The United States is now to a large extent a direct importer of this drug, to the detriment of this market. Cannabis indica, opening at 6d. dropped to 4d. in September, but the Americans unexpectedly scooped the market in November, and values rose up to 8d. Ceylon-Mysore cardamoms have been in good demand at fairly well-maintained prices, mostly for export. Cascarilla has been scarce and dear throughout the year, and is quite 12s. per cwt. dearer now for the better qualities than when the year opened. A poor crop of chamomiles has sent up the price by 50 per cent., and Huanoco and Truxillo coca-leaves have commanded very high figures, owing to short supplies and revolutions in Peru, but arrivals are better now. Colocynth stood at a low figure for the first half of the year but it gradually improved, when it was found there was little stock in producing centres, and in September as much as 1s. 8d. was paid for good apple. Croton-seeds have had a serious drop, 48s. being paid in October, against 70s. in January for good bright. Constant supplies and limited use are responsible for the decline.

Cubebs have during the whole of this year, as in 1898, been a veritable drug on the market. The trouble in Manila has shortened the supplies of dragon's blood, for which fancy prices have been paid throughout the year, the highest figure being 22l. for fine drop in July. The consumption of ergot would appear to be decreasing, and, although there has been little crop of Spanish this year, not much interest has been shown in the article on this market, although much higher rates have been paid in Hamburg and the United States. From 2s. 9d. to 2s. 10d. have been the highest prices paid here for Spanish, and 2s. 3d. to 2s. 6d. for Russian. Persian galls have been in diminished supply, and prices have advanced from 55s. to 85s. Gamboge is not so dear as it was, and many sales "without reserve" best indicate its position. Fine guaiacum has been scarce, but the price has been steady. Gum benzoin also has been steady, so far as Sumatra is concerned, but Palembang has been very scarce and in good demand at high figures, which is also true in a less degree of Penang, while Siam has been neglected or confined to private sales. Jamaica honey has varied somewhat in price, with a regular demand for all qualities. Ipecacuanha is the drug which has excited the keenest interest, and the year now closing is unparalleled in the history of this staple. In January the price of Rio root

stood at 10s., and from that time onwards it rose steadily until June, when it touched 18s. It now appears as if the shippers and importers had decided to supply the London market with such quantities monthly as will suffice to sustain the high prices; but during the latter half of the year, when regular consignments came forward, values gradually decreased to about 12s., and there is no immediate prospect of a return to single figures. The Cartagena root has also appreciated in value, and touched 11s. in June. The advent in October of a third broker offering this root somewhat disturbed the market, and he succeeded in bringing down the price to 9s., and, later, to 8s. 6d. Jalap has been better on the whole than the opening year promised, for the January price is fairly well maintained. Kino has dropped from its extremely and unwarrantably high rates, but at 1s. 9d. per lb. it is feared that scarcity will again set in. Owing to continued scarcity lycopodium has almost doubled its value within the year, being not now obtainable under 2s. Menthol, after hanging fire for some months, has steadily advanced during recent months, partly owing to Japanese speculation, favoured by a low harvest, so that the year closes with the article 3s. per lb. dearer than in January. We have kept our subscribers well posted on this article by our letters from Yokohama, which gives "inside" information of the markets in Japan. Business in musk is confined to a very few people nowadays, and it is only on rare occasions that sales are made publicly. Pile I is now 5s. lower than it was when the year began.

Nux vomica has attracted more attention, and prices have advanced. There has been a scarcity of Calcutta and Cochin seed for a long time past, and at present there is little, if anything, of good quality to be had on this market. The opium market has, as usual, been much influenced by speculative demand, but the harvest proved to be somewhat short of expectations, consequently values have improved by fully a shilling per lb. It is notable that the earlier parts of the crop exhibited a lower percentage of morphia than had been observed for several years. It was not until October that any movement took place in opium, when, owing to a "corner" in Italy, there was an enormous rise in prices not justified by demand. After values had been driven up about 20s. per cwt. the "boom" spent itself, but prices have not receded far. The demand for rhubarb has been exceedingly slow, and supplies have been abundant. Prices are on the whole lower, owing to forced sales. Saffron is about 3s. to 4s. dearer than it was in January, but in May it stood at 46s. 6d., or 7s. dearer than it is now. Jamaica sarsaparilla has been somewhat scarce, but prices have not fluctuated more than 1d. or 2d. per lb. Lima, Jamaica, and Guayaquil have had a downward tendency. Scammony-root is not a drug of first-class importance, and only finds buyers at comparatively low prices. In July 17s. 6d. to 18s. 6d. was paid, and in November 19s., but it is reported that higher prices than these have been paid privately. Tinnevely seena-leaves have excited keen competition throughout the season, chiefly for American account, and very high rates have been paid compared with previous years, 7d. being the maximum for fine bold. High prices were also paid for Alexandrian leaf for a short period, picked leaf selling at 9d. Spurious Alexandrian seena appeared on the market in October, and, although it is not devoid of the active principle, it is only saleable in the powdered form. Of the many kinds of beeswax offered in auction there are only three descriptions which find a ready sale—viz., Jamaica, Zanzibar, and Madagascar, preference being given to Jamaica, which has fluctuated very little, opening at 7l. 2s. 6d. in January and closing at the same figure in December, with an intermediate advance to 7l. 12s. 6d. August, September, and October were the

cheapest months, when prices for good hard ranged from 6l. 7s. 6d. to 6l. 17s. 6d. Very high prices have been paid for vanilla, especially Seychelles, and at almost every auction an advance was established. It is gratifying to see that, although the Continent absorbs large quantities of vanilla, London is still looked upon as the chief market of the world, as witnessed by the increasing quantities offered in the monthly auctions.

There has been a good business done in

SPICES—

generally throughout the year. Cochin ginger was very low at the beginning of the year and remained so for a considerable period, but in the autumn, reports that the next crop would be short induced speculative buying, and prices advanced and closed steady at the highest. Rough sorts have risen about 5s. per cwt., and cut descriptions 10s. to 15s. according to size. Japan and Bengal are also about 5s. per cwt. dearer, both qualities being very scarce. On the other hand Jamaica is much lower, closing after considerable fluctuations at about 10s. to 15s. per cwt. under last December's quotations. Zanzibar cloves have not been subject to so much speculation as in previous years, and the variations in price have been within narrow limits. The feature has been that after every rise the price gradually declined. Chillies are much dearer owing to scarcity, as also are capsicums. Pimento has been up and down, and is now about 17. per lb. cheaper than this time last year. Shipments of pepper have again been small this year, especially Singapore and Penang black, and these show an advance of nearly 1d. per lb., while Singapore white is $\frac{3}{4}$ d., and Penang white about 1d. per lb. dearer since last December. Cassia lignea has declined in price during the year by 5s. to 7s. 6d. per cwt. Cinnamon is about 1d. to 2d. dearer for the better kinds, and nutmegs are about 2d. per lb. cheaper. Nearly all aromatic seeds are dearer owing to the year's crops being poor, the notable exception being fenugreek.

OILS.

It is scarcely possible to deal in limited space with the numerous essential and fixed oils which come into the market, and which every year show as much variation in price as there is in quality. The more important oils, such as anise, cassia, cloves, lemon, and peppermint have shown little fluctuation. Some peculiar non-congealing anise oil was the subject of arbitration and comment in commercial circles early in the year, and Mr. J. C. Umney, by the examination of an authentic sample of oil of star-anise leaves and twigs which we received from M. Simon, of Paris, was able to identify these non-congealing oils as of that source, but his analysis showed that there are good points about this oil. The Manila trouble has diminished the supplies of oil of ylang-ylang, so that famine prices now rule; but otto of rose has been in abundant supply, and the advances of science are rapidly bringing us to independence of Nature for our supplies of scents. We have already dealt with the scientific aspects of this matter. Oil of turpentine has been one of the excitements of the year, values having advanced from 32s. in January to 38s. in October, when the highest point was reached. Poor harvest was again the cause. Olive oil is, and castor oil has been, the subject of considerable fluctuation, but no other common oil has attracted such interest as these.

THE HEAVY-CHEMICAL MARKET

has been in a healthy condition during the greater part of the year, which opened with a good trade and a fairly confident feeling. Important changes have taken place, and values for the most part rule much higher than they did at

the commencement of the year. This is due in part to better demand, but the principal factor has been the much higher cost of coal, raw materials, and other items of production. This is a most important point, and the one which should not be overlooked when comparisons are made. The most gratifying feature of the year's trade is that the demand from all home consuming trades has been better, and there appears every likelihood that this will continue. The year closes with prices firm, stocks low, and works busier than they have been for a long time, causing the outlook for next year to be more promising.

Further experience in the electrolytic production of bleaching-powder and caustic soda has proved still more clearly that this process in the one of the future. The Castner-Kellner Alkali Company (Limited) have been exceptionally busy at their works at Runcorn, and these works are now of considerable magnitude. During the early part of February a commencement was made in the erection of work at Middlewich in connection with the Hargreaves-Bird process, and as the year closes letters of allotment have been posted to shareholders in the "Electrolytic Alkali Company (Limited)," which has been formed with a capital of 500,000*l.*, to work the process. Various combinations have been brought about, amongst which may be mentioned "Borax Consolidated (Limited)," "The Yorkshire Indigo, Scarlet and Colour Dyers (Limited)," "The United Indigo and Chemical Company (Limited)," "The Calico-printers' Association (Limited)," and the general amalgamation in the salt-trade. A most disastrous explosion happened at the Kurtz Potassium-chlorate Works of the United Alkali Company (Limited), at St. Helens, on May 12. The report of the Home Office, issued on November 9, had been eagerly awaited by the trade in the hope that some definite explanation would be forthcoming as to the cause of the explosion; but, unfortunately, it only occasioned feelings of great disappointment, as it was genuinely felt by all interested that with the possible exception of one of the six theories put forward the others were all too fanciful and hypothetical. If the recommendations on the experts' finding are insisted upon, a radical and complete change in the method of packing and storing chlorate will be the result, necessitating considerable expenditure.

Bleaching-powder has been in good demand during the year. Our exports of bleaching-materials are considerably higher this year than last, and this increase has spread itself pretty fairly over each month. At the commencement of the year bleach stood at about 4*l.* 5*s.* to 4*l.* 10*s.* per ton for softwoods on rails, having suffered a drop of about 30*s.* per ton during 1893 owing to the competition from the electrolytic process. It early declined to about 4*l.* 2*s.* 6*d.* to 4*l.* 5*s.*, and continued at this until August, when the price was raised by 10*s.* per ton, and now at 6*l.* it is moving well, and further advance is not improbable. Caustic soda has met with an increased demand owing to its use in the mercerising of cotton for the production of a silky lustre, as there is now a very large quantity of such cotton used in the cotton-trade. It is computed that fully 300 tons of caustic soda per week are used in Lancashire and Yorkshire alone for this purpose, and this is expected to increase. Other countries are also now taking up the process. The price of caustic soda stood in January at 6*l.* per ton for 60-per-cent, with usual extras for higher strengths; 7*s.* 6*d.* advance was recorded in July; to day's price is 8*l.* to 8*l.* 5*s.* per ton for 60-per-cent., and higher prices are likely. Exports of alkali have increased, and also the imports slightly. Ammonia alkali commenced the year at the convention price of 4*l.* 2*s.* 6*d.*, and now stands at 4*l.* 7*s.* 6*d.* on rails at works. Chlorates of potash and soda commenced

the year in a depressed condition, and all through have been in full supply at constant values. Sulphate of copper has advanced considerably, owing to the higher price of the metal. It began the year at 19*l.* 5*s.*, ultimately touched 26*l.* 15*s.*, and now stands at about 25*l.* The quantity exported has dropped as compared with 1898, but the total value is higher. Makers of bichromates of potash and soda early in the year, owing to keen competition from the Continent, altered their discount terms from 3½ to 6 per cent, making prices 3½*l.* and 2¾*l.*, less 6 per cent., per lb. respectively. In June a further drop of ¼*l.* per lb., and an additional ½ per cent. discount, were recorded, but an upward change seems imminent, and is likely to happen early in 1900. Borax began well, and has been in steady demand all through at 16*l.* to 15*l.* 10*s.* per ton for crystals. The increase in exports of chemical manures in 1893 over 1897 has not been quite kept up, but business has been good, and the average price this year has been much higher. Sulphate of ammonia began at about 10*l.* 5*s.*, touched 9*l.* 18*s.* 9*d.*, ultimately advancing to 13*l.*, and to-day is in a good position at 11*l.* 6*s.* 3*d.*, with higher for forward. Coal-tar products during the early part of the year were in a very dull and depressed condition, but the market is now better. White powdered arsenic has met with an active demand, and is fully 40*s.* to 50*s.* per ton better value than twelve months ago. Zinc salts have been fairly constant all along, and firm in values without much fluctuation. Sal ammoniac stands 5*l.* per ton higher on the year, this advance having been recorded in October.

PHARMACEUTICAL CHEMICALS.

Citric acid, an article that we quote almost every week, is exactly 1*d.* per lb. higher than in January, but it has seen exciting times. At the beginning of the consuming-season the makers' price for crystals was 1*s.* 3*d.*; in May it was 1*s.* 5*d.*, in June 1*s.* 7*d.*; and in July, when consumption was at its height, 1*s.* 7½*d.* (the highest point of the year). From this time onwards there has been a gradual decline as the consumption fell off. It has by no means been a profitable season for the makers, owing to the extreme prices they had to pay for lemon-juice. Second-hand sellers appear to have had the best of the business, as when they came into the market with purchases made earlier in the year they were able to undersell the makers. We dealt fully with the position in February, May, and September. Tartaric acid has, to some extent, been influenced by citric, but, taking the year throughout, the fluctuations have only been slight. It is now ¼*d.* higher than it was in January; from August to beginning of December it remained at 1*s.* 1*d.*, but it has now declined ¼*d.*, following the lower rates for citric. The business in cream of tartar has been of a fairly even character, and prices have fluctuated within very narrow limits. In January the principal manufacturers of borax amalgamated under the title of "Borax Consolidated (Limited)," but they made no material alteration in the prices, which stand at 16*s.* for crystals and 16*s.* 6*d.* for powder. Oxalic acid has been practically unchanged throughout the year. Cinchona and quinine furnish the most important movements of the year. At the first cinchona-auctions in Amsterdam an average of 470*s.* per unit was paid, but at the second one the price suddenly rose to 670*s.*, and at the third to 1090*s.* (the highest point of the year). The first decline was to 850*s.* at the fourth sale, to 825*s.*, at the fifth, then to 760*s.* to 625*s.*, and 535*s.* in October; and in November it went up to 680*s.*, and this month to 775*s.* The reason for this rapid and strong advance, followed by an equally rapid decline, of the unit is to a certain extent accounted for by the smaller shipments from Java during the months of January and

February. This decrease was temporary, and the shipments in May already exceeded the considerable exports during the same period of the previous year. From July to November the shipments were very heavy, and yet the manufacturers kept the unit from falling too low. Meanwhile the price of quinine has fluctuated considerably. A speculative movement began in February, and continued without abatement until April, when a lull came. During this time prices rose from 10½d. to 1s. 8¾d. in second hands, and 10½d. to 1s. 9d. from makers (the highest point touched). Then came in July a decline which was partly induced by manufacturers who considered the advances excessive; this knocked the bottom out of the market, and 10½d. was reached again in September in second hands, and October saw a reduction in the makers' quotation to 11½d. But there was some irritation at this unwise cheapening of the article, and prices have since been gradually raised to 1s. 3d. It has been a memorable year for the speculators, who for a time excelled in ferocity all their previous plunges, and more "literature" as to Java cinchona was called forth than has ever been the case before. But again London has justified history and experience by attracting to this market abundant supplies when prices became abnormally high; while observations in Java by Mr. Standen, for the Indian Government, justify our statement that there is no immediate sign of impoverishment in the Java cinchona-plantations. Java quinine is also a reality to be reckoned with now. Between January and September the Bandong factory has exported 1,472 cases (588,800 oz.), against 1,172 cases (468,000 oz.) for the whole of 1898. So far London has received the bulk of the imports, 1,205 cases, and Amsterdam 267 cases. The factory's output is 10,000 oz. per day. The export figures do not represent the total output, as during the first six months of the year the Dutch E.I. Government bought 1,000 kilos. (35,000 oz.), in addition to which Java herself consumes a certain quantity. It has been arranged to hold regular quinine-auctions in Batavia, but the quantity to be offered is so insignificant that the German makers do not intend to be represented.

The competition in acetanilide has been very severe this year, and values close 2d. per lb. lower. Cocaine has advanced in price seven times, and to-day it is worth more than double what it was in January. This is owing to the scarcity of raw material referred to in speaking of coca. For the same reason pilocarpine and eserine were advanced in August, and again in December; so also veratrine. Salicin was advanced by 2s. per lb. in August. Salicylates remained unchanged until last week, when the high price of phenol compelled makers to move up. Sulphonal gave promise of sport in May, when it was reported that a new maker had entered the field, but he appears not to have found a place to rest his foot, for prices are the same as they were. Phenacetin has been severely cut, but makers this month advanced their prices for B.P. quality, the cutting being confined to the less-esteemed makes. The scarcity of worm-seed led to four distinct advances in santalin, commencing in July at 6s. 9d., and rising to 11s. 9d. in October, for large lots there has been a little excitement now and then in iodide, and the convention has been trying hard to squeeze out the Japanese manufacturers, who are its only menace, as early in the year the threatened split in the Chilean ring was averted. Japanese iodide of potassium is now coming to Europe with fair regularity, but not in sufficiently large quantities to shake syndicate prices. Glycerin has been very cheap this year owing to the severe competition among makers. It appears that some soap-makers who hitherto have sold their crude stuff to refiners now refine it themselves, and cut into prices in order to find a market. But

values took an upward turn with the approach of winter. Another excessively-cut article has been permanganate of potash, which fell at one period to 46s. 6d. for small crystals. Camphor is one of the most interesting articles of the year, and, taking our reports week by week, they show a succession of substantial advances in both Japanese and Chinese. The Japanese monopoly in Formosa came into force this year, and in our issues of June 3 and later we were able to outline the scheme. At times the crude market has been very excited, owing to the extravagant prices cabled from Japan and Hong-Kong, and refiners have been reluctant to accept the situation. In February they advanced the price ½d., again in May, October, and November, ultimately rising to 1s. 11d. Exactly twelve alterations occurred in German refined camphor, the year opening at 1s. 4d. and closing in December at 1s. 9d. On the Hamburg market a considerable speculative business has been done in refined camphor, both by second-hand holders and refiners, who, however, play off against each other. The last reduction of 1d. in refined was with the sole object of depressing the second-hand market; and in this it was successful.

Morphine has moved up and down uneasily, in conjunction with opium, but closes the year 3d. per oz. dearer. Codeine had a slight upward move in September. Thymol advanced 3s. in November, owing to the scarcity of ajowan seed and oil—another effect of the plague in India. Quicksilver has considerably fluctuated in price. The year opened at an advance to 7l. 12s. 6d. per bottle, and closes at 9l. 12s. 6d.—the highest figure of the year. In April there was a drop of 7s., but the metal quickly recovered, and from that time onwards one advance has succeeded another. Mercurials have risen and fallen with the fluctuations, and taking calomel as an example it has risen from 2s. 9d. in January to 3s. 2d. in December. The price of the metal, although not a record, is the highest for seven years.

OBITUARY.

"Nothing good is ever achieved in this world without some one having to pay the cost," remarks Mr. Winston Churchill in his "River War," and that thought naturally occurs when we look back upon this year's achievements and examine the list of those who have fallen in the fight. Many have gone to their rest full of years and honours. The London wholesale drugg-trade lost early in the year Mr. Richard Banks Barron, who had long been its spokesman; a fine old English gentleman he was—dignified, large-hearted, and true to his class. Not long after him died Mr. A. S. Hill, a nonagenarian, whose connection with the drug-trade went back to the days when the Pharmaceutical Society was founded, and who had long retired from the trade. Of its past officers the Pharmaceutical Society of Great Britain has lost Mr. Alexander Kinniment, one of the kindest of examiners, and Mr. Thomas Greenish, a past President and accomplished pharmacist; and the Irish Society no longer has on its roll the name of Dr. J. F. Hodges, one of the original members, who died this month. William Holland, of Market Deeping, J. Burt, of Worthing, and R. B. Carruthers, of Dumfries, are amongst the pharmacists of the old school who have passed away, and the death of William Lloyd Williams is a loss which the younger generation has suffered. Chemistry and pharmacy are also the poorer to-day through the death of Sir Edward Frankland, the famous teacher and water-authority; Von Waldheim, the leader of Austrian pharmacy; Bunsen, the father of chemical analysts; Kanny Lal Day, the Indian pharmacognosist; Tiemann, whose researches in the chemistry of essential oils have created a new industry; Wilhelm Merck, one of the famous Darmstadt chemical-house; E. C. O.

Stanford, the iodine-manufacturer, who was one of the few remaining connecting-links between pharmacy and chemical technology; and H. Y. Castner, the brilliant young American chemist. The losses in medicine have also been heavy, and include Sir William Roberts, who had specially studied diseases of the digestive organs; Mr. Lawson Tait, the ovariologist; and Sir Richard Thorne Thorne, the chief of the medical department of the Local Government Board, a sanitarian of great repute. The death of Mr. Richard Cadbury, while on a visit to the Holy Land, recalls the success of his great cocoa enterprise near Birmingham, and, not less, his beneficent efforts to improve the social condition of the Midland metropolis.

"Eine Bresche ist jeder Tag,
Die viele Menschen erstürmen;
Wer da auch fallen mag,
Die Todten sich niemals thürmen."

The Companies Bill.

THE President of the Pharmaceutical Society of Great Britain (Mr. Wm. Martindale) has followed up the November resolution of the Pharmaceutical Council by writing to the President of the Board of Trade, giving him a review of company-pharmacy since his predecessor, Mr. Carteighe, called the attention of the Board of Trade to the matter in January, 1895. Mr. Martindale urges:—

That inasmuch as a limited-liability company could not be examined and registered in accordance with the provisions of the Pharmacy Acts, it should be unlawful for any such company to assume or use any title implying registration under those Acts; and that it is not desirable in the public interest that any person not registered under the Pharmacy Acts should be permitted to exercise any control over the retailing, dispensing, or compounding of poisons.

Mr. Martindale also requests the President of the Board of Trade to grant him an interview, to which Mr. Ritchie diplomatically replies in the following terms:—

Board of Trade, Whitehall Gardens, S.W.,
December 16, 1899.

SIR,—I am desired by Mr. Ritchie to state that he has received your letter of the 14th instant, with its enclosures, expressing the views of the Pharmaceutical Society of Great Britain that a provision should be inserted in the Companies Bill rendering it unlawful for a limited-liability company to assume a title implying registration under the Pharmacy Acts, or for a person not registered under those Acts to exercise any control over the retailing, dispensing, or compounding of poisons.

I am to state in reply that the views of your Society will receive Mr. Ritchie's careful consideration, and that he will bear in mind your willingness to reply at a personal interview to any inquiries he may desire to make on the subject.

I am, Sir, yours faithfully,
GARNHAM ROPER.

We do not think that pharmacy has scored in this interchange of courtesies. It will be a great advantage to the President of the Board of Trade that he should have so full a statement placed before him of the views of the Pharmaceutical Society of Great Britain, but it would have been better tactics to reserve the views for the interview, as the latter would be more likely to come about by the baiting-process. We may point out that Mr. Martindale's letter contains an uncorrected version of the speech delivered by the Lord Chancellor on August 3. In our issue of August 26, page 369, we mentioned authoritatively the corrections which should be made on the shorthand-writer's report of the speech—which is the one embodied in Mr. Martindale's letter. We may also point out that it is scarcely correct to say, as he has said, that the Earl of Kimberley and the Earl of Dudley expressed approval of the Lord Chancellor's views—if by views those on the company-pharmacy question are implied. The Earl of Kimberley "agreed with the noble

and learned Lord that the Committee deserved approbation for giving a great deal of attention to the extremely complicated and difficult subject" of *company law*, and the Earl of Dudley "agreed with what the noble and learned lord on the Woolsack said as to the committee being practically unanimous" on the main point of the Bill. Neither Earl, far less the Lord Chancellor, appeared, in speaking of the unanimity of the Committee, to have the pharmacy and medical clauses of the measure in his mind. It was entirely to the larger question of company law that they were referring. We mention these facts because, in such a stupendous communication as that of the President of the Pharmaceutical Society, it is highly important that no statement should be made that has not been fully verified.

The pronouncement made by Mr. Martindale, presumably on behalf of the Council, is strangely inconsistent with several of the speeches delivered at the Council-table in November, and we hesitate to accept it as final. Nevertheless, the Council and the Society are now tied to the proposal submitted to the President of the Board of Trade, and if that is rejected, as it is likely to be, the representative body of pharmacists in Great Britain will find itself out of court or compelled to tell the Government that it did not expect to get all that it asked for. The trade will see how awkward the position has become.

TWO PLAYING THE GAME.

Bloomsbury President (showing his hand): "Put it there, and all will be well."

Whitehall President: "Thanks. You may call again—(aside)—when I send for you."

GENERAL MEDICAL COUNCIL AND THE R.C.S.

At the Council meeting of the Royal College of Surgeons on Thursday, December 21, a letter was read from Sir William Turner, F.R.S., President of the General Medical Council, respecting the registration of medical and dental students, and after consideration the College Council adhered to its previous resolution, that the General Medical Council has no power to say which medical schools the College should recognise.

"TRUTH" AND TESTIMONIALS.

Ever on the warpath, *Truth* has recently been investigating the genuineness of the "Testimonials" published by a "Dr. A. N. Owen," who carries on business in a top storey in Regent Street as a vendor of a "cure" for "superfluous flesh." Out of four eulogies purporting to have been written by people in the metropolitan district one party was unknown at the address given, the address of another could not be found, and the other two were themselves advertising-quacks, who, *Truth* surmises, no doubt work on the "you scratch-my-back-and-I'll-scratch-yours" principle.

HOW CINNAMON IS "FAKED."

An interesting article on the methods of "faking" cinnamon, plumbago, and other Ceylon products is published in a recent issue of the *Overland Times of Ceylon*. It appears that one Matthes Appoo is the genius who presides over the "business," and very cleverly he manipulates it. The adulterant which he uses for cinnamon is guava, or jungle-bark, which costs about 6d. per lb. in Colombo. This bark is carefully peeled, prepared, and dried as cinnamon, and closely resembles it in appearance. The sweet odour and the still sweeter taste peculiar to cinnamon are managed in a few hours by immersion in large tubs of the waste-water from the distillation of cinnamon oil, and afterwards, when dry, by the slightest touch on each end of a bundle of the false guava pipes with a cloth saturated with cheap cinnamon oil. Another mode of manipulation is by false packing, which consists in filling centres

of pipes of good cinnamon with pieces of guava bark or of spurious cinnamon.

SUPPRESSING CHARLOCK.

Successful experiments in the spraying of charlock or wild mustard, *Sinapis arvensis*, and the runch or wild radish, *Raphanus raphanistrum*, have been recently carried out, under the auspices of the Yorkshire College and the E. and W. Rudings Agricultural Council, in various districts in Yorkshire. The two spraying-materials used were sulphate of copper and sulphate of iron. When spray was used before, during, or immediately after wet weather, the weed escapes destruction; but when the spraying was effected in dry, calm weather the leaves of the charlock are blackened, and eventually completely destroyed. Success can only be ensured when the charlock-plants are sprayed in the youngest stage. The charlock-infested crops that were sprayed included oats, barley, and spring wheat; and there was no complaint from any centre of deterioration in either quality or quantity of the harvested grain, nor was any difference observed in the times of ripening. No injurious effect of the spraying was noticed in the case of young clovers and grasses amongst which charlock might happen to be growing. In the Yorkshire experiments a 10 per-cent. solution of iron was used, applied at the rate of 40 gals. to the acre—a 15-per-cent. solution may be necessary if the plants have passed beyond the first rough-leaf stage. Professor J. R. Campbell, who prepared the report, points out that the sulphate of copper possesses the advantage that a much smaller weight per acre is required, besides being a more agreeable material to use.

THE SERUM OF LIFE.

It is quite appropriate that on the eve of the last year of the century Professor Metchnikoff, of the Pasteur Institute in Paris, should have told the world through a newspaper interviewer that he is working on serums which will rejuvenate a particular organ of the body. Poor Dr. Brown-Séquard did that, and Zola has given us his view of the matter in the character of Dr. Pascal. But Professor Metchnikoff goes a step further, and to the organs generally. His idea is that senile atrophy is not due to the organic poisons, which are thrown off energetically in youth, accumulating in the system in old age, thus poisoning the noble cells, and bringing about the atrophy of the organ where the metamorphosis took place. He has discovered and proved conclusively that the noble cells are not dead in organs atrophied by senility, and, moreover, that they may be multiplied. By assisting them in their struggle with the plebeian cells they will continue to live as actively as in youth. Theoretically the organism will cease to grow old, and in practice life will be prolonged. The *Morning Post* explains how the discovery started from observations upon the injection of a guinea-pig's blood into a rabbit, large quantities killing, minute quantities increasing the number of blood-corpuscles enormously. Thus "a remedy against anæmia had been discovered."

Professor Metchnikoff's entire Section at the Pasteur Institute is now working to find the specific serums for each particular organ. If the blood-serum acts on the red globules, the liver-serum must produce similar effects on the cells of the liver, that of the brain on the brain, and so on. Experiments have demonstrated this. The specific kidney-serum was found some days ago, and Professor Metchnikoff is now determining the exact dose for medical purposes. The discovery has passed the period of mere laboratory experiments. The celebrated Dr. Vidal is now at work on human serums.

It will be observed that there is nothing very clear about all this. Simultaneously Drs. Sappelier and Thebaudt have reported to the Academy of Medicine that, assisted by a chemist named Broca, they have discovered and made experiments with a prophylactic serum against the craving for alcoholic stimulants.

CIGARETTE-SMOKING.

The sensational reports of the injury done by cigarette-smoking which are so industriously circulated in America has induced the *Lancet* Analytical Commission to turn its attention to the matter. In addition to the particulars given below, search was made for opium, phosphorus, arsenic, mercury, copper, and other heavy metals, which have at times been alleged to be present in cigarettes. The only one of these substances found was a faint trace of copper in the paper, and in such minute quantities that the reaction, an extremely delicate one, was only just obtained. The presence of copper is due to the lettering on the cigarettes. The mean results of the analyses of fourteen samples of cigarettes purchased in New York and London is as follows:—

	New York	London
Weight in grains of tobacco in one cigarette }	17.83	17.34
Weight in grains of paper in one cigarette }	0.63	0.63
Amount per cent. of mineral matter in paper }	2.98	3.21
Ratio of paper (=1) to tobacco }	1:27	1:27
Amount per cent. of nicotine in the tobacco (undried) }	0.94	1.05
Amount per cent. of moisture in tobacco }	11.53	13.32
Amount per cent. of mineral matter in tobacco }	11.81	13.0
Alkalinity of ash reckoned as K ₂ O per cent. }	3.32	3.35
Percentage amount of chlorine in ash }	6.30	6.21
Saccharine matters reckoned as grains of glucose in one cigarette }	1.87	2.26
Bodies like glycerine yielding oxalic acid on oxidation—grains in 1 cigarette }	2.82	2.13

Although it will be seen that the percentage of nicotine in the cigarettes seldom exceeds 1 per cent., it is doubtful whether any nicotine ever reaches the mouth of the smoker. The smoke-products of tobacco have been shown to contain an unimportant quantity of nicotine, but toxic bodies related to the pyridines.

GERMAN CHEMICAL-TRADE.

The Association for the Protection of German Chemical Industrial Interests recently held its twenty-second annual meeting at Strasburg. On the occasion of these annual gatherings the Secretary of the Association is accustomed to submit a report reviewing in detail the condition of the chemical-industry in Germany during the past year, and this has now been published. The information given would be valuable were it not for the fact that it deals with matters almost twelve months old, so that we only deal with it briefly. From the Secretary's last statement it would seem as if, speaking broadly, the year 1898 had been a favourable one for the German chemical-trade. In the compilation of his figures he has used the returns of one hundred and three companies which existed in 1898. These companies worked with an aggregate paid-up capital of 287,103,100m., on which they distributed in dividends the sum of 33,423,325m., corresponding to an average dividend of 12.69 per cent. In comparison with the preceding year this is only a slight advance, which is explained by the fact that the prices of the raw materials in almost every instance were considerably higher, without it being possible to advance values of the manufactured products in the same proportion. The average dividend of the

German chemical joint-stock works since 1889 has been as follows:—

Year	...	1889	1890	1891	1892	1893
Per cent.	...	10.58	12.81	11.29	11.92	13.18
Year	...	1894	1895	1896	1897	1898
Per cent.	...	13.44	12.71	12.30	12.11	12.69

The number of fully-occupied people employed in chemical-factories increased from 131,000 to 136,704, or 4.25 per cent.; wages advanced simultaneously from 120.9 to 129.6 million marks, or 7.2 per cent.—which figures may be taken as fair evidence of the activity in the German chemical industry.

Turning to individual products, the report states that the consumption of soda and potash increased considerably in Germany, but that the exportation fell off by 7,000 tons. Values also fell slightly, while the cost of production increased. The demand for sulphuric and hydrochloric acids during 1898 was so active that the factories could scarcely meet the demand, but the use of hydrochloric acid in the production of chloride of lime (bleaching-powder) is gradually decreasing owing to the electrolytic method of production. As regards chloride of lime itself, the extremely low prices were advanced about 20 per cent. on account of the increased consumption. The saltpetre-industry continued at a low ebb owing partly to the introduction of smokeless gunpowder and the keen competition. In pharmaceutical products, fine chemicals, essential oils, &c., there was a good demand throughout the year at slightly increased prices on the average. Acetic acid met a satisfactory demand, at, however, ruinously low prices; while more business was done in oxalic acid. In tartaric acid the French and Italian competition has again been strong, but the demand for the German-made article remained constant.

The Spectaclemakers' Company.

A MEETING of the Fellows of the Company was held on December 27, to elect two members of the Optical Committee. Sir Reginald Hanson (the Master) was in the chair, and opened the proceedings by announcing that five nominations had been received, of which two were informal through being received after November 30, and of the three remaining nominations one gentleman (Mr. Lionel Laurance) had withdrawn his name. The Master then declared the remaining two (Mr. George Oulver and Mr. J. H. Raphael) duly elected. Mr. Raphael thanked the meeting for electing him. Some of the Fellows protested that the proceedings were irregular, as proper notice had not been given of the latest date by which nominations could be received. The Master said he thought that perhaps there had been a little want of preciseness about the notices, but promised that by the next election some rigid rules would have been drawn up to govern the proceedings. This did not satisfy some of the Fellows, who withdrew as a protest. A vote of thanks to Sir Reginald Hanson for presiding at the meeting was then unanimously passed.

Deaths.

CONRAD.—From Berlin we learn that Privy Councillor Wilhelm Conrad has died at the age of 78 years. Mr. Conrad will be remembered by wholesalers in connection with Conrad's potassium iodide, which for many years was favourably known in this and foreign markets. His chemical factory was in Paris, and potassium iodide and refined camphor were his principal products. He advocated the manufacture of crude iodine in France, which was refined in Paris. He was the first to encourage speculation in iodine, and his appearance at the Royal Exchange, where

he was well known as the largest buyer, was usually the signal for an upward movement. When Mr. Conrad was invited by his uncle, a large banker in Berlin, to exchange his chemical career for an influential position in the Berlin financial world (which he did reluctantly) he sold his factory and drug-business to Mr. Etienne Roques, who originally had been in his employ. In his leisure hours Mr. Conrad discussed his bygone exploits in the chemical industry with fervour, and was equally keen in following present-day movements and developments.

LOWE.—At 330 Bulston Road, Wolverhampton, the wife of Mr. R. H. Lowe, chemist and druggist.

MOUNT.—On December 16, at 2 Palace Street, Canterbury, Mr. Wm. Mount, J.P., pharmaceutical chemist. Aged 78. The deceased gentleman, who had carried on his business as a chemist in Canterbury for the greater portion of his life, was well known in municipal circles in that city, having been a member of the Town Council for three decades. In November, 1886, he was elected an alderman, and the following year was elected to the mayoral chair, which he filled again in 1892, being on that occasion re-elected for the succeeding year. About six years ago he was attacked with paralysis, from which he partially recovered, but he never fully regained his strength, and eventually succumbed to that disease. Mr. Mount was a talented musician, and held the position of bandmaster of the Royal East Kent Mounted Rifles for twenty-one years. As an amateur rose-grower he was also successful, and frequently acted in the position of judge at large shows in the country. The deceased gentleman leaves a widow, but no children.

PICKLES.—On December 18, at Queensbury, Mr. Wm. Thompson Pickles, chemist and druggist. Aged 77. Mr. Pickles served his apprenticeship at Huddersfield, and went to Queensbury forty-four years ago. He commenced business in the High Street, and soon developed an extensive trade. He was a member of the Bradford Antiquarian Society, for a long period postmaster of Queensbury, and an ardent book-collector.

PLIMPTON.—On December 21, suddenly, at the Hospital, Richard Taylor Plimpton, F.I.C., F.C.S., Ph.D. (Marburg), chemical lecturer to the students of Middlesex Hospital. Aged 44. Dr. Plimpton had served on the Council of the Institute of Chemistry.

STEVENSON.—At Smallbridge, Rochdale, on December 23, Mr. Stephen Stevenson, chemist and druggist. Aged 66. The late Mr. Stevenson had been in business in Smallbridge for thirty years, retiring about six years ago owing to failing health. He was a Conservative in politics and an ardent churchman, and had officiated as sidesman, churchwarden, and lay consultee at St. John's for many years. He was also a member of the Parish Council.

THOMPSON.—At Carlisle, on December 24, Mr. Andrew Thompson, pharmaceutical chemist. In his 76th year. Mr. Thompson was a native of Carlisle, and one of its oldest and best-known citizens. He had been a member of the Pharmaceutical Society since 1846, for many years was its local secretary in Carlisle, and was a strong supporter of its aims. In local affairs he took a keen interest, and until a short time ago was a very regular attendee at the meetings of the Town Council, of which he was a member as Councillor or as Alderman from 1871. He was very fond of dogs, and seldom missed taking exercise of a morning, generally by Eden side, with one of his canine favourites. He was a member of the Carlisle Subscription Bowling Club, and on one occasion he won the championship pair of bowls. He was a bachelor.

WOODHEAD.—On December 23, Mr. Henry Charles Woodhead, chemist and druggist, Liverpool. Aged 64.

DRUGS to the value of 8,241*l.* were imported into Nagasaki (Japan) in 1898, against 5,851*l.* in 1897. The exports of drugs from this port were valued at 5,074*l.*, against 5,682*l.* in 1897.

PUBLIC DISPENSERS' ASSOCIATION.—A special meeting of this Association will be held at St. Bride's Institute, Ludgate Circus, E.C., on January 3, to ratify the affiliation with the Poor-law Dispensers' Association. All public dispensers invited.

Correspondence.

Assistants' Applications.

SIR,—In regard to Mr. McKellar's letter on Glasgow assistants in last week's number, I send you an application I had for a situation "that takes the cake" on anything of the kind I have ever seen. It is too good to pass.

Yours sincerely,

Dundee, December 20.

CHARLES KERR

[The application is a letter by an apparently poorly-educated person, in the following terms:—

SIR,—In answer to your advertisement in to-day's *Herald*, I offer my services to you. I am 27, pretty strong, and willing to undertake anything I am fit for. Hoping you will give me a trial, I remain, yours faithfully,

We suppress the town from which the letter was dated.—ED. C. & D.]

Hand-scales Wanted.

SIR,—“Small” country chemists often want for special occasions a pair of hand-scales that will turn to, say, $\frac{1}{4}$ gr., that the inspector will stamp, and that do not cost much more than 10s. The dispensing scales in daily use have too rough wear, and a pair of delicate balances costing some guineas is beyond the means of many.

Cannot some of our “sundry” houses supply this “long-felt want”?

Yours faithfully,

WILTS. (173/64)

Still Another Indian Experience.

SIR,—Several letters have appeared in the *C. & D.* lately about the experience of assistants in India. I should like to give you mine. There is plenty of room for steady men in India. Too many unsteady ones come out, whose failing is whisky. An employer is only too willing to keep a steady man when his time is up. I have known an assistant's fare being paid one way to ensure his coming back after a three months' trip home. Again, I have seen an assistant arrive here from England so drunk that he could not sit on a pony that would have been much easier to ride than a rocking-horse. He was sent back within two months, and his employer lost 1,500r. over him.

It would pay someone to start an agency for supplying steady and honest assistants, someone who would inquire into the *bona fides* of a man before sending him out. Employers would be willing to pay a good commission.

As to my own experience, I left London in 1896, and am now drawing 300r. per month, equivalent at the present rate of exchange to 20%. Besides, I get my house-rent free (another 46l. 10s. a year). I got married last year, and now keep a very decent pony, which has come in first several times at our local gymkhana. In the season (we have a season like Brighton) I work from 8 A.M. to 7 P.M.; I take duty two nights weekly till 10.30 P.M., and on Sunday morning 10 A.M. till 2 P.M. The junior assistant lives on the premises and takes the rest of the duty, as I did when a junior. I keep a cook (man), bearer (table and body servant), ayah (my wife's servant), sweeper (the man who does all the dirty work, feeds the dogs and poultry), and syce (groom). All these take 50r., or 3l. 5s., a month as wages. As to food, we live on 100r., or 6l. 10s., a month, and very well too, as when I landed in India I was 8 stone; now I am 12 stone 10 lbs. Taxes come to about 100r. per year, so I have 140r., or nearly 10%, a month left to pay for clothes, luxuries, and to save. During December, January, and February we open at 9 A.M. and shut at 5 P.M. I get eighteen days' holiday on full pay yearly, and I hope in 1902 to take a six months' trip home, all going well. The other two firms here have the same hours, and I believe their salaries and work are almost identical with ours, except that they go in for wines, saddlery, bacon, &c., our own outside sources of revenue being tobacco, cigars, and butter. Would I work at home again? Well, not as long as I can keep a place like this.

Yours truly,

ANOTHER ASSISTANT IN INDIA. (205/50.)

Mussoorie, N.W.P., November 28.

The Future Pharmacist.

SIR,—In dealing with the future it is necessary to compare notable specimens of the past with the present, thereby

making deductions from the same. Previous to the advent of the cash chemist, drug-store, modern chemist, &c., an assistant with an elderly appearance was considered an advantage. Windows ill-dressed and neglected, conspicuously displaying the coloured carboy and mystic specie-jars, suggested the scientific if the whole were badly lighted and had a private appearance. Hours of business were very long; after closing the red lamp still burnt, indicating “Pleased to serve you up to bedtime”; trade was confined and limited, profits exceedingly high; and, owing to the small number of customers and want of recreation, those engaged behind the counter, as a natural result, were not too amiable in serving the customers.

In the modern pharmacy the above is revolutionised; the assistant usually sought after is young, fresh-looking, and almost boyish in appearance, indicating energy and smartness; the windows are bright, well dressed, attractive, filled with everyday, seasonable side-lines such as the public require, and which suit the particular district. The smartness taking the place of specie jars, whilst the carboys have, to a certain extent, taken a back seat. The whole establishment is now well lighted, brighter, and more open; hours of business are shorter; there is a half-day weekly holiday; salaries are increased. Those engaged in pharmacy are more alert, and have an open, independent bearing. Profits are smaller, but made up in a greatly-increased return.

The lessons to be learnt are:—We must be content with smaller profits but larger returns, as the wages are so high, and the general prosperity of the country so great, the amount spent in luxuries in which chemists might share by side-lines is enormous. The shop and windows should be well dressed and lighted, hours shorter, so that everyone concerned becomes fitter for his various duties. The public will respect you more for the apparent independence. Lastly, trust your neighbour by joining an association for mutual trade benefits and social intercourse. Men of observation know that only those have suffered who have not moved with the altered times, and if chemists will always bear in mind the fact that it is as necessary to bring as much business acumen in conducting their business successfully as it is for a draper, grocer, or any other, coupled with the advantage of its being personally conducted, I truly believe

Stores may come and stores may go,
But the chemist will go on for ever.

Yours for pharmacy,
OPTIMIST. (199/53.)

Companies, Competition, and Counter-practice.

SIR,—At the bottom of one of your columns in last week's issue there is a short paragraph which deserves much greater prominence than is given to it. It refers to the *Lancet's* reply to a correspondent that it is impossible to prevent the public going to a chemist for advice, or to prevent anyone giving advice, unless the latter person should assume a medical title to which he has no claim. I do not call attention to it so much for itself as for your endorsement of the advice as “sensible”; and I think most chemists, whether given to prescribing or not, will agree with you. A medical man gives his experience in return for a fee, and it would not be possible for the law to stop anyone else doing the same—even if it wished—provided there is absence of fraudulent assumption of title.

I particularly call the attention of our pharmaceutical friends to it because I think it sums up what is impracticable and what practicable in our own aims. We are at present flooded with schemes all to one end—the extinction of “company” pharmacy. One man comes forward pompously and says: “I have entered into an agreement with the State. My part of it I have fulfilled, inasmuch as I have qualified myself for the performance of my duties as a chemist. It is now for the State to fulfil its share.” Hitherto the State has not appeared seriously alarmed at these words, and “no one seems one penny the worse.” But what was the share of the State? Was it to limit the distribution of all drugs whatsoever to the few who qualified? Is no one to sell Epsom salts and magnesia but Mr. Lord Gifford? Can that gentleman say that he has never prescribed for anyone? Are medical men less hot about counter-prescribing than we are about company pharmacy? And yet even Mr. Gifford, I think, would endorse the *Lancet's* statement as “sensible”—and why? Because it is

next to impossible to persuade the Legislature to step in. And if this is so with a powerful body like the medical, how much more so with a body with so comparatively little influence as the pharmaceutical? Is it the State's share of the agreement to limit dispensing of prescriptions to the qualified chemist? Why, then, are doctors allowed to dispense? Have they been trained to the work? Anyone with much experience in dispensing nowadays knows only too well that many of them can hardly write a prescription decently without incompatibility, much less dispense it; yet no one stops them. What, then, is the scope of this "agreement"? It is merely that the dispensing and retailing of certain dangerous preparations shall be limited. Has the law failed here? Certainly not. It has vested powers in the Pharmaceutical Society by means of which that body can instantly stop any person transgressing the regulations.

It is essential in the discussion of this question that we should clearly distinguish between (1) what the law can do; (2) what it meant to do; (3) what it is willing to do. We see that by legal means we can stop any unqualified person selling certain poisons or calling himself a chemist. That is what the law can do. But we cannot prevent seven persons banding themselves together and then calling themselves chemists, and that is what the law meant to do. Clearly, then, it is our duty to agitate in order to get the law amended. We want a qualified directorate. I beg my brother pharmacists to commit themselves to no wild plan, whatever backing it may have, and to expect no millennium, however loudly promised. There is one thing certain—we cannot stop competition, for, did it not come from outside, there is enough and to spare within our own ranks. All we can do is to strive to persuade our Legislature to see that the competition is lawful and honest.

Yours obediently,

AN ORDINARY CHEMIST. (201/1)

Dispensing Notes.

Solubility of Antifebrin.

SIR,—The following prescription was handed in by a local doctor, who said he got it made up at another chemist's quite clear:—

Quinin. mur. ...	...	...	gr. xvj.
Antifebrin. ...	...	...	3ss.
Glycerini ...	...	...	3j.
Pulv. gum. acaciæ ...	...	...	3j.
Aq. ad ...	...	...	3viij.

M. Ft. mist.

Half a wineglassful every six hours.

I made it up by mixing the gum acacia and glycerin in mortar, adding some water, and putting in powders in mortar also. The result was a thick, muddy mixture.

Yours,

ASSISTANT. (174/31.)

[This should be a clear mixture. The antifebrin dissolves in hot water, and, we find, remains in solution.]

An Unsatisfactory Inquiry.

SIR,—Among the odd combinations which in my dispensing experience I have come across is the following. As the discordant element is not quite apparent, it may interest some of your readers:—

Sodii salicylatis ...	...	...	3iss.
Sodii nitritis ...	...	...	gr. 45
Vin. ipecac. ...	...	...	3j.
Ext. glycyrrh liq. ...	...	...	3j.
Aq. ad ...	...	...	3ij.

Ft. mist.

One-twelfth part every six hours.

Yours truly,

J. E. H. (165/19.)

[There does not appear to be anything in this prescription to in any way give one trouble; sodium salicylate and sodium nitrite are compatible as long as no free acid is present. The mixture made some days ago has not as yet undergone any change. Correspondents sending dispensing queries should never omit to tell us what they found to happen in

making up the prescriptions which are the source of difficulty to them.]

Quinine and Liq. Am. Acet.

SIR,—Will you kindly inform me if it is possible to make a clear solution with the following prescription?—

Liq. am. acet. ...	...	...	3v.
Quin. sulph. ...	...	...	gr. xx.
Tr. nucis vom. ...	...	...	3j.
Mag. sulph. ...	...	...	3ss.
Elixir aurant. ...	...	...	3ss.
Aq. ad ...	...	...	3vj.

Yours truly,

MARINA. (151/54.)

[You cannot get a clear mixture. Liq. am. acet. is the cause of the trouble, insoluble quinine acetate being formed. The sanction of the prescriber should be obtained to omit the liquor.]

An Unsightly Mixture.

SIR,—The mixture (page 1001) is mist. ol. morrhæ et ferri of Guy's Hospital Form., which we are often called upon to dispense. How do they turn it out?

G. F. E. (204/44.)

Legal Queries.

184/62. *Warts* (Ireland).—As medicine stamp duty is not payable in Ireland it is not illegal for you to export the article unstamped to any part of Great Britain, but the first seller of the article in Great Britain must see that duty of the proper amount is paid by stamps affixed to the medicine.

188/40. *L.*—"Compound castor-oil" pills may be sold, and are sold with impunity. They contain a trifle of castor oil. As to the use of alum in baking-powder, see THE CHEMISTS' AND DRUGGISTS' DIARY, page 215. Whether it will be considered noxious under the new Act remains to be proved after January 1, 1900.

202/61. *Manufacturer*.—There are hazy notions about in respect to the new Sale of Food and Drugs Act, which you seem to share. If you turn up THE CHEMISTS' AND DRUGGISTS' DIARY, page 215, and read the article carefully, you will find that condiments and the like will be considered as foods, but the Act does not require any statement as to their composition.

203/7. *W. J.*—Wholesalers are not exempt from labelling any scheduled poison. See THE CHEMISTS' AND DRUGGISTS' DIARY, page 213. Belladonna plaster is a poison, whether spread or in roll, and should be labelled accordingly.

204/30. *Tartarline*.—Baking-powders made with acid sulphate of potash have never been alleged to be unwholesome as in the case of alum powders. The Sale of Food and Drugs Act, 1900, section 26, brings baking-powders under the definition "food," and therefore section 3 of the 1875 Act (in regard to mixture with ingredients which are injurious to health) will now apply. See THE CHEMISTS' AND DRUGGISTS' DIARY, page 215.

206/87. *Jean*.—If the net profits of any firm amount to 160*l.* a year, income-tax must be paid, irrespective of the number of partners in the firm.

205/32. *Lac. Sulph.* uses the following label:—"Milk of Sulphur. This is not the precipitated sulphur of the 1898 Pharmacopœia; it is prepared by the process of the old London Pharmacopœia, which has been so long approved and required by the public." Is this sufficient to free the seller under the Sale of Food and Drugs Act? [Not unless he calls the attention of each purchaser to the notice on the label before the purchase is completed.]

207/30. *A Subscriber*.—You do not tell us what incandescent mantle, not Welsbach, you are using on the Welsbach fittings, but we presume it is not "Sunlight," which has been held not to be an infringement of the Welsbach. The use of any other is at your own risk.

Trade Report.

The prices quoted below are the bottom prices obtained for bulk quantities by importers and manufacturers, who do not supply retailers. They are in many cases exclusive of various charges.

42 Cannon Street, London, E.C.: December 28.

OWING to quiet holiday-business, brief space suffices to cover the markets this week, so far as immediate business is concerned. On pages 1065-68 we have sketched the market fluctuations of the year.

Heavy Chemicals.

[These prices are for other market-centres than London.]

The position in the heavy-chemical market remains practically unchanged. Business transacted since last writing has, of course, been small owing to the holidays, but orders for present requirement are fairly plentiful, and prices all round keep very firm.

ALKALI PRODUCE.—There is little new to report in this department. Bleaching-powder and caustic soda are still scarce for immediate delivery, and values rule firm. Chlorates are quietly steady.

SULPHATE OF AMMONIA is very quiet just now, at values practically as last mentioned.

RECOVERED SULPHUR.—Scarce, and in request at 4*l.* 17*s.* 6*d.* to 5*l.* 2*s.* 6*d.* per ton on rails in bags.

LINSEED AND COTTONSEED CAKES.—A better business is now being done in this market, there being a very fair demand for all qualities. Prices are firm. Linseed cakes, 95 per cent. pure, 8*l.* 15*s.* to 9*l.* per ton. Oilcakes 7*l.* 11*s.* 3*d.* to 7*l.* 17*s.* 6*d.* Cotton cakes, best makes, 4*l.* 12*s.* 6*d.* to 4*l.* 17*s.* 6*d.*; and seconds, 4*l.* 7*s.* 6*d.* to 4*l.* 15*s.* per ton.

COLOURS meet with a fair demand, and prices show little fluctuation. Lamp black, 5*s.* to 7*s.* 6*d.* per cwt., according to quality. Pure ivory black, 14*s.* to 14*s.* 6*d.* per cwt. Mineral black, best qualities, 4*s.* to 4*s.* 6*d.*; and ordinary, 3*s.* to 3*s.* 3*d.* Oxide of iron—finest, 20*l.* per ton; medium, 10*l.*; and common, 7*l.* Ochres—English, 57*s.* 6*d.* per ton upwards, according to strength and shade. French, J. F., 6*l.* 5*s.* to 6*l.* 10*s.*; French, J. C., 62*s.* 6*d.* to 65*s.* per ton. Umber—Devonshire, 42*s.* 6*d.* to 60*s.*; Turkish raw, 7*l.* 10*s.* per ton. Yellows, 9*s.* 3*d.* to 16*s.* per cwt., according to quality; pulp yellows, 30*s.* to 40*s.* per cwt. Pure chrome, 50*s.* per cwt.

Liverpool Market.

Liverpool, December 27.

CASCAHILLA-BARK.—A parcel of 15 packages, partly of fine quality, will be offered at auction on Friday.

TURPENTINE is selling at 38*s.* 3*d.* per cwt. for American on the spot.

HONEY.—Stocks of both Chilean and Californian are much less than they were at the same time last year, and are firmly held.

QUILLARIA-BARK.—Holders are firmer, asking from 13*l.* 10*s.* to 13*l.* 15*s.* per ton. Offers sent out to Chili at a lower price for shipment have been refused.

CREAM OF TARTAR.—Foreign correspondents say that crude is scarcer abroad, and refined is more firmly held.

CASTOR OIL.—All kinds are quiet, and not in much demand.

Hamburg Market.

Hamburg, December 26.

Owing to the holidays, business is almost at a standstill, and values are mostly unchanged since last Tuesday.

ALOES, CAPE, is steady, at 65*m.* to 66*m.* per 100 kilos.

CAMPHOR.—Refined is quiet. The second-hand holders are realising December contracts, and sales have been effected at 350*m.* per 100 kilos.

CONDURANGO BARK continues firm, at 190*m.* per 100 kilos.

ERGOT OF RYE is unchanged, good quality being held at 460*m.* to 470*m.* per 100 kilos.

MENTHOL is firm, at 21*m.* per kilo.

LYCOPODIUM shows a strong market, and is held to-day for 410*m.* per 100 kilos.

QUININE is steady, but without business just now. To day's quotation is 39*m.* per kilo.

SANTONIN is quoted 22*n.* per kilo. in second hands.

SPERMACETI is steady, at 290*m.* per 100 kilos.

WAX.—Carnauba is firm, at 86*m.* to 96*m.* for grey and 128*m.* for yellow. Japanese quiet, at 61*m.* per 100 kilos.

OILS.—Cod-liver is unchanged, at 67*m.* per barrel for non-congealing oil. Castor oil is steady, but the demand is very small; first pressing in barrels on the spot is 54*m.*, and forward delivery 53½*m.* per 100 kilos. Russian anise oil firm, at 14½*m.* per kilo.; star-anise at 14½*m.* per kilo.; peppermint oil, HGH, 5½*m.* per lb.; ditto, Japanese, 8½*m.* per kilo.

The Senega-root Crop.

Mr. James Hartford (Messrs. Schoelkopf, Hartford & MacLagan), in the course of a letter to a New York contemporary-states that the collection of senega-root early in the season was neglected on account of the low prices that it brought to the diggers, and consequently the crop was a small one, probably not more than 70,000 or 80,000 lbs. His firm sold their old stock before June last at low prices, expecting to replace with the new crop at a lower figure, but in this they were disappointed.

Residual Products of Gasworks

The following notice has been issued from the Foreign Office:—

Information has been received that agents for the Boer Government are endeavouring to purchase some of the residual products of gasworks. All manufacturers are warned to be cautious as to accepting such offers to purchase coming from any new or unknown quarter, as it may amount to the offence of trading with the enemy.

In reference to the above a correspondent in the *Times* thinks that some astute War-Office official has got at the Foreign Office with this cock-and-bull story in order to lay a foundation for an explanation, which will be wanted later, as to why this country has no stock of picric acid. The residual products referred to as being wanted by Boer agents are carbolic and cresylic acids, which, by nitration, become lyddite, melinite, &c. The correspondent suggests that if there is any fear of the Boers making a "corner" in picric acid, or the raw material from which it is made, the British Government ought to give out extensive orders for the explosive. It would probably find, however, that "the residual products" of British gasworks are all taken up in advance by ammunition-makers.

Trade of French Guinea.

It is satisfactory to find that Great Britain continues to hold by far the largest proportion of the trade with French Guinea, in spite of the restrictions placed in our way by our neighbours across the Channel. According to the report of Mr. Arthur, British Consul for that colony, the total imports to French Guinea amounted to 360,795*l.*, as against 305,522*l.* in 1897. Of this amount the United Kingdom last year contributed no less than 69 per cent. In exports Great Britain again stands in the front rank, and took 78 per cent. last year of the total exports, which amounted to 311,999*l.* Rubber is the most important staple of the colony, and as long as this industry flourishes the prosperity of French Guinea is said to be well assured. It is to be found all over the colony, but many of the trees in the districts nearer to the coast have been worked out by the natives in their eagerness to collect the rubber, and so they are obliged to go further into the interior. The value of gum copal exported was 10,655*l.*, of which 10,462*l.* went to the United Kingdom and Sierra Leone. Other exports (of which the Consul gives no figures) are wax, kola-nuts, ground-nuts, benniseed, palm-oil, &c. The United Kingdom takes half the wax (known as Conakry wax), the remainder being divided between France and Germany. The kola-nuts and palm-oil, which are exported in small quantities, only find markets in the other colonies of West Africa.

Cablegrams.

SMYRNA, December 28, 10.20 A.M.:—Owing to continuance of frost affecting the poppy-crop, prices of opium are advancing, and 250 cases have sold at 9s. to 9s. 2d., chiefly for the United States.

HAMBURG, December 28, 11.55 A.M.:—The following articles have shown a firmer tendency since the holidays:—Carnanba wax, lycopodium, and ergot of rye. Quinine is 39½m. per kilo., and refined camphor 360 n. per 100 kilos.

NEW YORK, December 28, 3.28 P.M.: The market is quiet. Opium has developed a firmer tendency and \$315 per lb. is now wanted for druggists. Ergot of rye is easier, at 50c. per lb., while spermaceti is higher, at 30c. Mexican sarsaparilla is also easier, at 13c. per lb., but damiana-leaves have advanced to 9c. Vera Cruz jalap is firm, at 13c. per lb.

London Markets.

ACID, CARBOLIC.—Reports from Germany state that the demand is so great that manufacturers cannot undertake further orders for delivery during the next six months. In second-hands only a small quantity is available: makers ask 200m. per 100 kilos. for 39° to 40° crystals.

CAMPHOR.—German refined is very firm, and a further advance is probable; one German refiner advises purchases at 1s. 9½d. per lb., the price for forward delivery. English refiners still quote bells and flowers in ton lots at 2s., and are very firm.

CARBIDE OF CALCIUM is easier, being offered at 17l. per ton f.o.b. Hamburg, and 18l. for next year's delivery.

CHAMOMILES.—Belgian can be had at from 86s. per cwt. c.i.f. to 95s.

CINCHONA.—The auctions to be held in Amsterdam on January 11 will consist of 7,211 bales and 327 cases, weighing altogether 678,145 kilo., divided as follows:—Ledgeriana, 490,704 kilos.; succirubra, 79,078 kilos.; and hybrid, 108,363 kilos. The Ceylon exports from January 1 to December 14 have been:—

	1899	1898	1897	1896
Lbs. ...	591,355	844,046	644,672	1,231,359

COCOA-BUTTER.—The auctions to be held in Amsterdam on January 9, will consist of 80 tons Van Honten's, 15 tons Helm, 4 tons Mignon, 4 tons De Jong, and 2 tons foreign brands; while on the same day, in London, 65 tons Cadbury's brand will be offered.

CREAM OF TARTAR has an easier tendency at 73s. per cwt. for finest white crystals; 75s. for powder; and 76s. for 95-per-cent. powder.

GALLS.—For Persian blue 85s. per cwt. is reported paid this week.

GLYCERIN.—Refined is unchanged for spot delivery at about 54s. to 57s. 6d. per cwt. for English double-distilled, s.g. 1.260, from makers; and German 53s. 6d. to 65s. per cwt. Some of the makers are willing to book contracts for next year's deliveries at lower rates.

GUM TRAGACANTH.—From Constantinople we hear that the first crop has proved a small one, in consequence of which local speculators have been buying, and prices have advanced. The rise, however, is not expected to continue. In London prices remain very firm with an upward tendency.

OIL, CASSIA has sold in a small way at 4s. 1d. per lb. spot for oil containing 80 per cent. to 85 per cent. cinnamic aldehyde.

OIL, CITRONELLA, is reported to have a firmer tendency, at 10½d. to 11d. per lb., spot.

OIL, COD-LIVER.—The Bergen market for Lofoten cod-liver oil is without change, at 75s. per barrel, f.o.b. Bergen, but no sales are being made. The exports to date from Bergen are 14,149 barrels, against 8,049 barrels last year. Another correspondent, writing from Bergen on December 20, reports that new steam-refined oil has been offered in Bergen at the equivalent of 72s. per barrel, c.i.f. Hull, without finding buyers, the figure being considered prohibitive.

OIL, PEPPERMINT.—Japanese dementholised has been in fair inquiry at 3s. 10½d. per lb. spot; and sales of 40 per-

cent. oil have been made at 5s. 9d. spot; but 6s. is now generally asked.

OIL, STAR-ANISE, is slightly lower, there being sellers on the spot at 5s. 9d. per lb., although some ask 6s.

OPIUM has advanced quite 6d. per lb. on the London market, in consequence of a further rise in Smyrna, but of course little business has actually been done, although a good inquiry is reported mostly for manufacturing kinds. Salonica is quoted 11s. Fine Persian is quoted 12s. 9d., but there is nothing doing. From Constantinople, under date of December 21, we hear that

there has been little doing during the last fortnight, and sellers have begun to show signs of desiring to dispose of some of their holdings at the present level. If a *bona-fide* buyer came forward they would no doubt accept the equivalent of 8s. 4d. per lb. f.o.b., or perhaps a trifle less, for druggists' grades. Weather has taken a very wintry turn in the interior, but the cold is not severe enough at present, in our opinion, to cause any apprehensions in regard to plants. The Smyrna "bull" clique is still at work doing its best to raise prices, but hitherto their efforts have been unavailing. The fortnight's sales are as follows:—10 cases Karahissars at 8s. 7d. f.o.b., 8 cases Malatia at 9s., 8 cases Zilles at 9s. All for speculative accounts.

POTASH BICHROMATE.—A convention has been made by the British makers, which is to cease after the first three months of 1900. There appears to be no first-hand sellers at the moment, and the business recently done has consisted of second-hand parcels.

QUICKSILVER keeps very firm at 9l. 12s. 6d. per bottle from the importer, and second-hand at 9l. 11s. 6d.

QUININE.—Quiet, with sellers in secondhand at 1s. 3d. per oz., for spot and March 1s. 3½d.

WAX, JAPANESE.—For arrival is quoted 35s. per cwt., c.i.f., being firmer; 32s. 6d. will buy good pale squares on the spot, and small sales have been made at this figure.

ALMANACS.—The annual deluge of calendars and almanacs has again begun. This week we have to note the useful, durable, and clearly-printed calendar of the Liverpool Lint Company, with full postal information on each monthly sheet.—The presentation almanac of Mr. R. Priest, chemist and druggist, Cardiff, is an attractive, instructive, and amusing production, copiously illustrated by some very creditable photo-blocks.—Coombs' Eureka Aërated Flour Company (Limited), 8 Farrington Road, E.O., have sent us a useful and artistic letter-rack of illuminated metal, which contains a calendar for the next three years.

A PHARMACEUTICAL ANNUITANT'S SAD DEATH.—Mr. A. Braxton Hicks held an inquiry on Wednesday concerning the death of William Copney, pharmaceutical chemist (79), 19 Stormont Road, Lavender Hill, S.W., who died on December 22. Miss Mary Copney, a journalist, identified the deceased as her father, and said he was a pharmaceutical chemist and an annuitant of the Pharmaceutical Society. They had had a great deal of illness at home, her mother dying on December 21. Her father suffered greatly with his heart, and on Friday witness went to his bedroom and saw him sitting on the bed beginning to dress himself. When she went in later she discovered that he had fallen down between the bedstead and the wall. When a doctor arrived he pronounced life to be extinct. Witness had often tried to persuade him to have a doctor, but he always refused. Dr. E. T. Whitehead deposed the cause of death to be serious apoplexy, accelerated by the shock of the fall, and the jury returned a verdict of accidental death.

SALAD OIL FOR OLIVE OIL.—With reference to the olive-oil case against the International Tea Company, reported last week (page 1035), Messrs. H. Finkler & Co., 29 Mincing Lane, E.C., write:—"On September 6 a representative of Messrs. Kearley & Tonge (Limited), trading also as the International Tea Company (Limited), requested us to procure for them 5 half-chests of olive oil, as we had done before, as they were running short of half-chests. To do them a favour, and acting as brokers only in the matter, we purchased from a very respectable importer in the City 5 half-chests of olive oil of a well-known brand, marked 'Sublime olive oil. Warranted pure.' We handed our sellers' d/o to Messrs. K. & T. (Limited). It now appears that the warehouseman at our sellers' wharf delivered by mistake 5 half-chests of a different quality, marked 'Salad oil.' Unhappily Messrs. K. & T. did not notice the mistake, although the goods were quite different from those invoiced. We heard no more about the matter until we read your report." The documents which Messrs. Finkler submit to us clearly show that the fault was not theirs, and it would be wrong to suppose that they supplied cottonseed oil for olive oil.

Proprietaries in India.

(By our Indian Correspondent.)

THERE is a broad field, hitherto practically unworked by British traders, for the sale of proprietary medicines in our Indian Empire. That the need for the simple proprietaries in constant sale by the ordinary pharmacist is prevalent must be evident when we consider the teeming millions of enervated natives who swarm in the land, and it is rather surprising that British houses have not long ago followed the examples of their American and Continental competitors, and turned their attention more to providing for this demand. In the following notes I have endeavoured to indicate the avenues along which success in this direction may be pursued.

HEADACHE-WAFERS.

It has been left to an American firm to practically establish a monopoly—at small cost too—in Bengal for headache remedies. The tardiness of British firms is surprising when we remember that everything—the glare, the heat, a touch of sun, and so forth—is apt to produce “headache” in its most aggravated forms. The style and get-up of the American firm’s production is attractive and neat—white boxes (3¼ in. by 1½ in. by 1½ in.) with red-bordered blue and white labels; the space at the ends and sides being used with notices. Each cachet is stamped “Headache Cure.” The box contains twelve wafers, and retails at 1r. per box.

SARSAPARILLA.

This blood-purifier, in the form of a “concentrated fluid extract,” is another favorite of the Bengali. We know of one English brand only on the market, and it has its American-made bazaar counterfeit, upon which huge sums are spent in advertising, and which has secured a considerable sale, and would do a great deal more were the price half what it is at present. The Bengali is continually searching for vigor, good blood, and clear complexion, and there is no reason why British sarsaparillas, properly handled, should not supplant the cargoes of American and French products at present on the market.

MALARIA-MIXTURES.

For the greater part of the year Bengal, Assam, Behar, and Orissa are full of malaria and its attendant troubles and complications. And yet the British wholesaler has not yet turned his attention to this splendid opening for mixtures for malaria, liver, and spleen. The statistics on the subject show that malaria is responsible for three-quarters of the mortality in these provinces. Foremost in the field are the indigenous Calcutta-made preparations, and their name is legion. But one which I have in my mind’s-eye has a sale which is estimated at little under 70,000 bottles per annum. This is an ordinary quin. sulph., ferri sulph., and magnes. sulph. combination, and perhaps the most extraordinary feature about its success is the fact that it is not now advertised in any way. It was advertised years ago in a very thorough manner, but that has been gradually stopped, and yet the sales are, if anything, on the increase. It has a vast number of imitators, for the most part manipulated by dismissed employes; but the proprietors have amassed great wealth, and live, providing for a vast circle of relatives, as is the Hiadoo method, in regal style on the outskirts of the city. The mixture is put up in round white bottles holding 9 oz. and 16 oz. respectively, and it retails at 1r. and 1r. 8s. per bottle.

MALT AND OIL AND SYRUP OF HYPOPHOSPHITES.

In this land of debility, exhaustion, and breakdown, where the lean-shanked, comatose Hindoo yearns for adipose and muscle, and who, in order to attain the latter end, would play football every day of the 365, we cannot too strongly urge our “English brother” to cast his eye on Calcutta as a distributing centre for these preparations. But the prices must be reasonable. Malt and oil should be produced to retail at 1r. 4s. or 1r. 8s., and compound syrup of the hypophosphites at a similar figure, and directions with instructions as to diet should not be omitted on the labels.

“PEOPLE’S” REMEDIES.

Another enterprising American firm have created—not only in Bengal, but throughout the length and breadth of Hindustan—so great a demand for their popular remedies that they have become recognised household aids. The firm hail from Des Moines, Iowa, and their preparations are pain balm, cough remedy, and colic, cholera, and diarrhoea remedy, a trio which have had an immense run since their introduction. These remedies, being handy, reliable, and inexpensive, appeal strongly to the residents scattered over the large tracts of land in the interior at great distances from each other and from all medical aid. They are sent out in panelled flat 1½-oz. phials with plain wrappers. Around each phial is a booklet containing the directions for use in nine languages. The price, 1r. per phial, is well within the reach of all classes.

Olive Oil in Syria.

UNITED STATES CONSUL G. BIE RAVNDAL, of Beyrout, has been investigating the olive-oil industry in Syria, and finds that it is an important and growing one. The natives, he says, are learning by degrees how to properly cultivate, harvest, and press the precious fruit. There are olive-groves all over Syria and Palestine, but especially along the littoral. Some of the largest are in the vicinity of Nablous in Samaria, in the Akka district, and near Beyrout, Tripoli, and Latakia. The Shwayfat grove (just outside Beyrout) alone produces in an average-crop year about 2,240,000 lbs. of oil, valued approximately at 23,000*l.* In the Tripoli neighbourhood, the production of olive oil was 4,386,000 lbs. in 1897 and 708,000 lbs. in 1898. The Akka district produces annually from 1,000,000 lbs. to 2,500,000 lbs. This gives no idea, however, of the total output in all of Syria; such information is not obtainable.

Mr. Ravndal’s report is, of course, written for the American market, but there are points in it of interest to this country. For instance, he recommends Americans to import the purest native oil which the Syrian market affords, subject it to the best modern methods of purification, and finally retail it in bottles. Mention is made of an American firm at Haifa who manufacture both soap and table oil, which competes successfully with the best French oil, and sells in New York to the extent of some 700 gallons per annum. The average price of common oil at Beyrout varies between 4½ and 5½ piastres per oke (8*l.* to 10*l.* per 2½ lbs.). A French concern has lately started an oil-mill at Yafa which produces olive oil of good quality that is exclusively shipped to France. There are also some American colonists at Haifa who have proved that by judicious management the olive-tree can be made to bear fruit every year; and that by picking the olives from the trees, instead of beating them roughly down with sticks, also by carefully selecting the olives when picked, laying the unclean ones aside and reducing the heaps to prevent fermentation, and by the introduction of modern olive-presses, the industry may be made very profitable.

Mr. Ravndal reports that American physicians have written him occasionally, inquiring the price of Syrian olive oil, saying in effect that they need pure olive oil in their practice and that such an article is scarcely to be found in American drug-stores, where adulterated French and Italian olive oils prevail. One of these gentlemen has informed him that good olive oil is being successfully used in place of cod-liver oil for medicinal purposes. Another correspondent, who deals in olive oil for the table, repeats the old story that most of the so-called high-grade olive oil sold in the United States is Syrian, North African, and European olive oil mixed with cotton-seed oil exported from the United States to France and Italy. Concluding, Mr. Ravndal cannot see any reason why olive oil should not be sold and bought direct without the intervention of French middlemen.

NOT THE HAIR WASH—A provincial barber, attending to a clergyman, remarked on the scarcity of the rev. gentleman’s locks. “Have you ever tried our special hair-wash?” he added, expectantly. “No, sir,” replied the clergyman; “it wasn’t that that did it.”

Wills of Deceased Chemists.

BREARLEY.—The late Mr. Henry Brearley, chemist and druggist, Crown Street, Halifax, having died intestate and unmarried, letters of administration to his estate have been granted to his brother, Mr. Arthur Brearley, by whom the deceased's personality has been sworn at 1,198*l.* 17*s.* 1*d.*

BURR.—The will of the late Mr. Thomas Burr, manufacturing chemist, Thorne, Yorkshire, has been proved by Mr. Richard Woodley and Mr. Joseph Stanley, both of Thorne. The testator's estate was sworn at 7,563*l.* 19*s.* 10*d.*

CLARK.—The will of the late Mr. Edwin A. Clark, chemist, Leicester, has been proved by Mrs. Jane E. Clark, the widow, and Mr. Samuel Wilcox, solicitor, the executors of the testator, whose estate was sworn at 3,095*l.* 13*s.* 9*d.*

CLARK.—The will of Mr. R. Unwin Clark, chemist and druggist, 14 Kent Street, Jarrow-on-Tyne, who died on July 3, has been proved by Miss Mary Clark, the sole executrix of the testator, whose estate was sworn at 824*l.* 16*s.* 10*d.*, of which 630*l.* 18*s.* 7*d.* is net personality.

COCKSHOTT.—The late Mr. William Cockshott, chemist and druggist, 16 Tyson Street, Bradford, left property sworn at 2,351*l.* 14*s.* 1*d.* gross and 2,296*l.* 15*s.* 7*d.* net. Probate of the deceased's will has been granted to his son and to Mr. Walter Longbottom, 81 Ryan Street, Bradford.

DELF.—The late Mr. F. D. Delf, chemist and druggist, 50 Westgate and Savile Town, Durham, left estate sworn at 770*l.* 12*s.* by his widow and executrix, Mrs. Emma Delf.

ELERS.—The late Chas. George Elers, Major West Somerset Yeomanry Cavalry, partner in the firm of Barrett & Elers (Limited), who died on July 13, leaves estate sworn at 22,947*l.* 11*s.* 5*d.* gross, the net personality being 1,090*l.* 8*s.* 8*d.*; his executors are Mr. E. S. Crick, 111 Upper Richmond Road, Putney, and Mr. Edwin de Gruchy, Avoca, Grove Park Gardens, Chiswick.

FORSYTH.—The late Mr. R. Forsyth, thirty-five years with Messrs. Evans, Lescher & Webb, who died at his residence, 54 Dresden Road, Highgate, on October 2, leaves estate sworn at 1,965*l.* 6*s.* 4*d.*, the net personality amounting to 1,932*l.* 15*s.* 11*d.*. The deceased's widow is sole executrix of the will, and to her probate has been granted.

JEFFERY.—The will of Mr. Henry Jeffery, chemist and druggist, 2 Imperial Road, Olifton, Bristol, who died on March 11, has been proved by Mrs. Jeffery, the widow, and Miss Florence C. Jeffery, the daughter of the testator, whose estate was sworn at 3,228*l.* 4*s.* 7*d.*

JESSOP.—The will of Mr. J. J. Jessop, of Jessop & Co., wholesale drysalts, St. Mary Axe, who died on October 2, has been proved by Mrs. Jessop, the widow, Messrs. John W. Percy E., and Charles F. Jessop, the sons, and Mr. Alfred E. Bearne, St. Mary Chambers, St. Mary Axe, the executors of the testator, whose estate was sworn at 3,556*l.* 12*s.* 4*d.*

KEEVIL.—The estate of the late Mr. Robert Keevil, pharmaceutical chemist, West View, Olifton Wood, Bristol, has been sworn at 9,725*l.* 17*s.* 11*d.*. Probate of the deceased's will has been granted to Mr. G. M. Carlile, 7 Upper Belgrave Road, Bristol, and to Mr. Arthur Gordon Keevil, son of the testator.

LYON.—The will of Mr. James Lyon, chemist and druggist, 18 Gladys Road, West Hampstead, who died on October 24, has been proved by Mr. Edward Chalinder, 64 Cambridge Road, Hastings. The testator's estate is sworn at 2,467*l.* 2*s.* 10*d.*, of which 2,145*l.* 1*s.* 10*d.* is net personality.

METTERS.—The estate of the late Mr. Stanley C. Metters, chemist and druggist, Plymouth, is entered for probate at 31*l.* 0*s.* 4*d.*. The testator's father, Mr. William H. Metters, is the sole executor, and to him probate has been granted.

MOON.—The will of Alderman Moon, manufacturing chemist, 1 Springfield Road, Brighton, who died on June 17, last, has been proved by his widow, Mrs. Martha J. Moon, and Alderman John Edward Stafford, Western Road, Brighton, the executors of the testator, whose estate is sworn at 13,648*l.* 16*s.* 1*d.*

PEARMAN.—The will of Mr. Henry Pearman, chemist and druggist, Wokingham, Berks, who died on August 9, has been proved in London by Mrs. Anne Pearman, the widow, and Mr. E. A. Hussey, ironmonger, Wokingham. The testator's estate was sworn at 1,345*l.* 1*s.* 2*d.*, of which 1,301*l.* 19*s.* 10*d.* is net personality.

PELLOW.—The late Mr. J. C. Pellow, chemist and druggist, Bude, Cornwall, having died intestate and unmarried on July 15, letters of administration to his personal estate have been granted to his brother, Mr. Lucius H. Pellow, dentist, Holsworthy. The deceased's estate was sworn at 426*l.* 19*s.*

PLATT.—The estate of the late Mr. Thomas Platt, 85 Gracechurch Street, &c., who was largely interested in Clarke's blood-mixture and other popular patent medicines, and who died at Brighton on January 14 last, is entered at Somerset House at the sum of 34,538*l.* 5*s.* 8*d.*

RILEY.—The will, with a codicil, of Mr. John Riley, of the firm of John Riley & Sons, of Cooper Street, Bradford, &c., manufacturing chemists, who died on June 25, has been proved by Mr. Joseph E. Riley, manufacturing chemist, the son, Mrs. Margaret A. Fitton, of Kirkham, the daughter, and Mr. Charles A. Sanderson, Blackburn. The testator's estate is entered at 71,175*l.* 3*s.* 5*d.*, of which 66,946*l.* 17*s.* 10*d.* is net personality.

ROW.—The gross estate of Mr. Frederic Row, chemist, Braintree, Essex, who died on August 4, is sworn at 1,417*l.* 9*s.* 1*d.* by his widow and sole executrix, Mrs. Lucinda Row, to whom probate has been granted.

TAYLOR.—The will of Mr. Joseph E. Taylor, chemist and druggist, Salford, has been proved by Mrs. Taylor, the widow, and Mr. J. W. Whitworth, chemist and druggist, by whom the testator's estate was sworn at 719*l.* 12*s.* 4*d.*

THOMAS.—The will of the late Mr. James Thomas, chemist and druggist, Bridge, Kent, has been proved at Canterbury by Mrs. Eleanor Thomas, the widow and sole executrix of the testator, whose personality was sworn at 525*l.* 2*s.* 6*d.*

WILLIAMS.—The late Mr. Walter Williams, pharmaceutical chemist, of Hereford, left an estate worth 4,267*l.* 17*s.* 8*d.*. This has just been proved by Mr. Walter T. Williams, the executor of the testator.

Coming Events.

Monday, January 1.

Pharmaceutical Society of Ireland, at 3 P.M. Council meeting. *The Livingstone Exhibition*, St. Martin's Town Hall, Charing Cross, W.C., will be open from January 1 to 5, from 11 A.M. till 7 or 10 P.M.

London Institution, Finsbury Circus, E.C., at 4 P.M. Lecture by Dr. A. H. Fison on "Colour-mixture and Colour-sensations." This lecture is the second of a course of four, adapted for young people, the other lectures taking place on January 4 and 8.

Tuesday, January 2.

Royal Institution of Great Britain, at 3 P.M. "Fluids in Motion and at Rest" (III.), by Professor C. V. Boys. The course of lectures adapted to young people will be continued on January 4, 6, and 9.

Thursday, January 4.

The Röntgen Society, [20 Hanover Square, W., at 8 P.M. Mr. Chisholm Williams will read a paper on "The Interpretation of Skiagrams."

Chemists' Assistants' Association. Cinderella at the Portman Rooms, Baker Street, W., at 7.30. Tickets may be had of Mr. C. Morley, 3 Bucklersbury, E.C., or Mr. H. H. Robins, 113 Ridley Road, Forest Gate, E., or any member of the committee.

Friday, January 5.

Glasgow Chemists' and Druggists' Assistants' and Apprentices' Association, 100 West Regent Street, Glasgow, at 9.15. Open night; short papers.

The Chemists' Annual Ball will be held on January 17, at the Portman Rooms, Baker Street, W. Tickets—17*s.* 6*d.* (gentleman's) and 12*s.* 6*d.* (lady's)—can be had from Mr. W. Warren, 24 Russell Street, Covent Garden, W.C., or any of the stewards.